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Determination of Biases in Sight-Singing Textbooks Published between 1980 and 2018

A Dissertation Presented

By

BETH ANN HUEY

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Department of Music and Dance

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DEDICATION

I dedicate my life's work in music to God. "Now to him who is able to do far more abundantly beyond all that we ask or think, according to the power that works within us, to Him be the glory in the church and in Christ Jesus to all generations forever and ever. Amen."

(Eph. 3: 20-21)

I also dedicate this work to my family. First, to my husband Daniel, who offered much support and believed in me. He has given me much encouragement throughout the dissertation process. Then, to my parents, who encouraged my pursuit of music as a child and have continued to do so.

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Special thanks also go to my church family, who has been an incredible support to me. Thank you for your prayers and encouragement. All glory to God who provided me with the courage and drive to complete this dissertation.

ABSTRACT

DETERMINATION OF BIASES IN SIGHT-SINGING TEXTBOOKS PUBLISHED BETWEEN 1980 AND 2018

MAY 2020

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Directed by: Professor Gary S. Karpinski

In sight-singing classes at colleges and universities in the United States, there are various solmization methods in use, such as movable *do*, scale-degree numbers, and fixed *do*. Few sight-singing textbooks and other related books are willing to stake a claim of preference for one method over the other. Since many textbooks and other books are unwilling to take a pedagogical stance on a solmization system, instructors need to research each book in order to determine the biases in the book and how well it works for their classes. To aid them in that endeavor, this dissertation determines the biases in textbooks and reveals which textbooks work well for which systems.

The dissertation begins with short descriptions of solmization systems as gathered from articles, textbooks, and other aural-skills related books along with a review of the literature. Then, it discusses elements of music to evaluate, reveals which elements receive an evaluation in the textbooks, and indicates why some were not chosen. From here, the dissertation lays out the expectations for each category evaluated using support from aural-skills related books and articles. After laying out the expectations, the dissertation describes the approaches of each textbook in select categories, reveals biases in the textbooks, and identifies textbooks that align more closely to movable pedagogical methods and others that align more closely to fixed pedagogical methods.

The results of this dissertation reveal that most books use pedagogical methods of multiple solmization systems, but still have a bias for predominantly one method. About 64 percent of the textbooks (14 books) use more movable system approaches, whereas

approximately 36 percent (8 books) use more fixed system approaches. When twentieth-century idioms occur, most of the books use fixed approaches for that material.

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CHAPTER I

INTRODUCTION

In sight-singing classes at colleges and universities in the United States, there are various solmization methods in use, such as movable *do*, scale-degree numbers, and fixed *do*. Few textbooks and other sight-singing related books are willing to stake a claim of preference for one method over the other. Rogers (1996) writes that textbooks often do not include instructional commentary on solmization systems because “authors (or publishers) do not wish to alienate a portion of the market by exposing convictions too strongly proclaimed or positions too focused on a single pedagogical stance” (p. 149). Since many textbooks and other books are unwilling to take a pedagogical stance on a solmization system, instructors need to research each book in order to determine the biases in the book and how well it works for their classes. To aid them in that endeavor, this dissertation determines the biases in textbooks and reveals which textbooks work well for which systems.

There are two basic types of solmization systems: fixed and movable. Some instructors prefer to use no method and choose neutral syllables. All of the systems share a common goal of preparing students to sight-sing music of various genres. However, fixed and movable systems use different pedagogical approaches: Fixed systems explicitly model absolute pitch-name reading whereas movable systems model scale-degree functions. Examples of fixed systems include fixed *do*, letter names, and pitch-class numbers (in which C is 0, C#/Db is 1, D is 2 and so forth). Examples of movable systems include movable *do* and numbers where the number corresponds to the scale degree.¹

Books that closely adhere to one of these methods frequently present topics differently from the way books that closely adhere to another do. Fixed-*do* textbooks

¹ Unless instructors adopt a hybrid method of numbers where “6” maps onto tonic in minor. See Winnick (1987, 24) or Damrosch (1894, 25) for this usage.

often begin with stepwise melodies that leap to specific intervals in C major. The keys gradually progress to containing greater numbers of sharps and flats in them. Movable-*do* textbooks often begin with stepwise melodies and melodies that outline the tonic triad in multiple keys.

In the United States, research shows that colleges and universities use movable systems most often, whereas a small number use fixed systems (Pembroke and Riggins 1994; Taggart and Taggart 1994; More 1985, 17; Collins 1979). Rogers (1997) states that “Movable *do* with *do*-based minor is currently in greatest use nationally at the college level and is believed by many leading authorities to best project the internal relationships found in tonal music” (p. xviii). Gordon (1993) also indicates that movable *do* with *do*-based minor is in greatest use nationally at the college level (p. 269).

The textbooks selected for this study fit into one of two categories: (1) sight-singing textbooks (excluding complete musicianship ones) appropriate for a two-year curriculum published between 1980 and 2018 and (2) sight-singing books that are popular with instructors using particular solmization systems. Those years were chosen because they reflect trends and methods commonly used in books today. From the survey of books, twenty-two fit into these categories. Chapter VI will describe the selection process in further details.

There are three different approaches to presenting the solmization systems in textbooks: Some textbooks simply define the various solmization systems and list the syllables. They often identify strengths and make recommendations, but do not limit textbooks to one method. Other textbooks do not define the solmization systems nor do they list the syllables. They refer to the solmization systems and some make recommendations, but do not limit textbooks to one method. Other textbooks make no mention of solmization systems.

About half of the books (six out of thirteen) published before 1997 and chosen for this study mention solmization syllables. Two of them identify the syllables in just one

solmization system with minimal explanation of those syllables: Houlahan and Tacka (1991a/b) list movable-*do* syllables and Danhauser, Lemoine, and Lavignac (1910-1913) list fixed-*do* syllables. That indicates a preference for those methods. Three of them, Levin and Martin (1988a), Horacek and Lefkoff (1989), and Damschroder (1995), list the syllables in various systems and claim that they all work equally well. One other, Cooper (1981), suggests original text for vocal pieces (all of the excerpts are vocal ones) (p. xix). He does not limit his book to using the original text; he discusses syllables for the various systems and recommends fixed *do* and movable *do* for folk songs in major keys. Of the seven that do not identify the syllables, Thomson (1981) recommends using the neutral syllable *la* because he feels that solmization syllables are a crutch (p. ix), Bland (1984) and Cole/ Lewis (1909) do not offer any recommendations, Benward (1989) recommends the system preferred by the instructor, and Lloyd, Lloyd, DeGaetani (1986), Delone (1981) and Stevenson/Porterfield (1986) recommend using any system. Of the two books published in 1997, Adler's book mentions solmization systems, but claims neutrality regarding a specific method. In the foreword of Henry (1997), Rogers (1997) describes the benefits of the various methods, writes that most colleges use movable *do*, and claims that most instructors use a combination of approaches. Most books published after 1997 discuss the syllables used in various solmization systems and list strengths of each. One exception, Karpinski and Kram (2017), makes mention of the methods, but does not identify the syllables. However, in his *Manual for Ear Training and Sight Singing*, which is coordinated with the anthology, Karpinski (2017) mentions both movable *do* and numbers in all discussions of scale degrees and letter names when introducing clefs and transposition. The current trend is to mention the syllables and describe the strengths, but most textbooks do not directly identify their biases.

In the written explanation of various systems, some books recommend movable systems for tonal music and fixed systems for post-tonal music (and some of these books note that fixed systems work for all music), whereas others advocate no system.

Benjamin, Horvit, and Nelson (2003) claim that “Tonally oriented systems, such as movable *do* and numbers, work very well in primarily diatonic contexts; however, they lose their efficacy in highly modulatory materials and most twentieth-century idioms” (p. xi). Rogers and Ottman (2014) write “Movable systems promote relative pitch, fostering a sense of tonal function and facilitating transposition skills. Movable-*do* solfège with *do*-based minor and scale-degree numbers are best suited to common-practice tonal music, while movable-*do* solfège with *la*-based minor is arguably more appropriate for modal music and some folk music” (p. 409). Concerning fixed systems, they note “Fixed systems promote absolute pitch and may lead to superior clef reading. They can be used equally well for tonal, post-tonal, and modal music” (p. 410). Murphy, Phillips, Marvin, and Clendinning (2016) claim:

All singing systems have merit and choosing some system is far superior to using none. To reinforce musical patterns, we recommend singing with movable-*do* solfège syllables and/or scale-degree numbers, but we provide a summary explanation of both the movable- and the fixed-*do* systems in Chapter 1 to help students get started....For solfège in modal contexts, we present two systems in Chapter 5, one using syllables derived from major and minor, and one using relative (rotated) syllables (p. xi).

Despite the authors finding value in all methods, they prefer movable *do* or scale-degree numbers for tonal melodies. Many of the books cited in this paragraph recommend using multiple methods—movable *do* for tonal music and fixed systems for highly chromatic and post-tonal music. These books will use movable-system pedagogical approaches when presenting tonal music, which is frequently the type of music students learn in the first year and a half. The movable approaches could hinder students of fixed systems. For example, some textbooks that emphasize movable systems present melodies in all key signatures in the first chapter. That is more difficult for students who are learning fixed systems.

Many of the sight-singing books chosen for this study make claims that they are usable for any solmization method. Adler (1997) states “I remain neutral as to the

adoption of any specific method of sight singing” (p. xv). Benjamin, Horvit, and Nelson (2003) claim “This book does not depend on any particular singing system” (p. xv). Karpinski and Kram (2017) write “No method (solfège, conducting, rhythm syllables, etc.) is advocated, nor does any single approach to sight singing shape the *Anthology*” (p. xi). DeLone (1981) notes “No single system such as fixed or movable *do* is advocated throughout” (p. 2). Lloyd, Lloyd, and DeGaetani (1980) claim “The authors have found that any system can produce results—if the student practices diligently” (p. viii). The description from these books makes it sound as though they work well with any system. Perhaps some of them do, but others do not. For example, Adler does not work well with movable *do* because several of the patterns and melodies in Chapter II require students to use chromatic syllables or simply to sing neutral syllables. Many beginning students at colleges and universities are learning solmization syllables for the first time; adding chromatics too early can hinder their learning.

Even though many of the books claim to not advocate a system, some of them suggest that there is a system that they use. Krueger (2017) asserts “Any tonal system can be used successfully if that system is used consistently and incorporates the music literacy pedagogy presented in this book” (p. xvi). But what exactly is the music literacy pedagogy presented in the book? The pedagogy that the textbook uses to teach music literacy will often favor fixed or movable characteristics strongly favoring one of those two systems. This dissertation will uncover the methods used to teach music literacy, which will reveal preferences for a solmization system.

In this research, most of the sight-singing books claim to not subscribe to a solmization system, but the organization and pedagogical approaches reveal biases. The results reveal that all books use pedagogical methods reflecting various systems, but most of them have a bias for predominantly one method. About 64 percent of the textbooks (fourteen books) use greater amounts of movable-system approaches, whereas approximately 36 percent (eight books) use greater amounts of fixed-system approaches.

Of these twenty-two textbooks, seven (four from movable approach and three from fixed approach) uses fair amounts of fixed and movable methods. The use of both approaches in these books creates difficulty for each system. For example, Cooper (1981) and Lloyd, Lloyd, and DeGaetani (1980) present key signatures with more than three sharps or flats early in the book, which is difficult for fixed system users. Modes occur early, which has the difficulty of chromatic syllables in parallel movable systems. Various leaps occur early in these books, which is difficult for both movable and fixed system users. When twentieth-century idioms occur, most of the books use fixed approaches for that material.

The dissertation begins with short descriptions of solmization systems as gathered from articles, textbooks, and other aural-skills related books along with a review of the literature. Then, it discusses elements of music to evaluate, reveals which elements receive an evaluation in the textbooks, and indicates why some were not chosen. From here, the dissertation lays out the expectations for each category evaluated using support from aural-skills related books and articles. After laying out the expectations, this dissertation describes the approaches of each textbook in select categories, reveals biases in the textbooks, and identifies textbooks that align more closely to movable pedagogical methods and others that align more closely to fixed pedagogical methods.

CHAPTER II

SOLMIZATION SYSTEMS

All solmization systems share a common goal of preparing students to sight-sing music of a wide variety of styles and genres. However, fixed and movable systems use different pedagogical approaches: In fixed systems, absolute pitch names receive emphasis; in movable systems, tonal function receives emphasis.

In fixed-*do* solmization, all Cs are sung as *do* including C-flat and C#, all Ds are sung as *re*, Es as *mi*, Fs as *fa*, Gs as *sol*, As as *la*, and Bs as *si*. Many parts of Europe including France, Italy, Spain, as well as in northern China, Japan, Iran, and in some universities and conservatories in the United States use the fixed-*do* system. Some instructors using fixed *do* also use scale-degree numbers in order to teach function. Whereas the goal of fixed *do* is note-name reading, associated approaches while teaching this method are intervallic, functional, and implicit, among others. Some advantages of fixed *do* are that it aids music reading in all clefs, has only seven syllables to learn, is usable for all styles of music, and—for speakers of Romance languages—it uses the note names students have already learned.

Some theorists believe that using fixed *do* helps students to develop absolute pitch. For example: Taggart and Taggart (1994, 205-206) and Middleton (1984, 32) argue that fixed *do* helps students to develop absolute pitch. However, Levitin and Rogers (2005), Miyazaki and Ogawa (2006), and Trainor (2005) conclude that early music exposure during a critical period is necessary to develop absolute pitch. This critical period is between ages six and nine for most children. According to Levitin and Rogers (2005), this critical period is later for developmentally delayed individuals, but it needs to be during a “maturational stage before the development of other cognitive skills that might undo it” (p. 29). This research implies that adults cannot develop absolute pitch. That means that college-aged students (ages 18-22) can not acquire absolute pitch. Gregerson, Kowalsky, Kohn, and Marvin (2000) conclude that “early childhood

exposures increase the probability of AP in genetically susceptible students” (p. 282). Some of the students surveyed did not have any music training before age seven suggesting that early training is not necessary. It is unknown if those students had Williams Syndrome, autism, or developed AP around ages 8 or 9. Overall, research concludes that absolute pitch can not be learned by adults.

Some have tried to modify fixed *do* in order to accommodate chromatic pitches,² but chromatic fixed-*do* syllables have not become popular. Some disadvantages of fixed *do* are that it does not explicitly model tonal function, it encourages intervallic thinking which could produce unmusical results³, and keys other than C are difficult to sing because the intervals change between the syllables.

The use of letter names is another fixed system. Letter names are sung inflected or uninflected. White and Lake (2002) encourage the use of English letter names rather than fixed *do* syllables because asking Americans to use fixed *do* “would be asking us to use a foreign language when we already have a perfectly good set of symbols for pitches [i.e. letter names]” (p. 34). Similar to fixed *do*, the use of letter names aids music reading in all clefs and the syllables apply to all genres of music. Other advantages are the syllables are already known to the students and the pitch names are transferable to instrumental notation. However, some disadvantages of letter names are that they are

² Henry Siler (1956) suggested a fixed system that accounted for chromatics up to double sharps and double flats. He suggested that all pitches in a C major scale end with the vowel *a*, a note raised by a half step should end with the vowel *e*, a note lowered by a half step should end with the vowel *o*, a note raised by a double-sharp should end with the vowel *i*, and a note lowered by a double-flat should end with the vowel *u*. Using his system, the solmization syllables for a C-major scale are *da-ra-ma-fa-sa-la-ta-da*; C# major scale are *de-re-me-fe-se-le-te-de*; and C-flat major are *do-ro-mo-fo-so-lo-to-do*. This modification did not become popular.

³ Rogers (1983) describes interval reading as unmusical finding problems with note-to-note reading. He writes “Smoothness in projecting a musical line, in fact, often requires making long-range step-wise mental and aural connections between non-adjacent pitches. This can (or should) be true for both tonal and nontonal melody performance and obviously is undermined by too much narrow concentration on each individual note or intervallic pairing” (p. 21).

awkward to sing, polysyllables result when singing inflections, and they do not help with the development of relative pitch.

In movable-*do* solmization, the solmization syllables do not denote absolute pitch. The syllables are relative and change according to the tonic. There are two varieties of movable *do*: one in which *do* always corresponds to the tonic regardless of mode, and the other where *do* always corresponds to the major tonic of the key signature. Both contain the same syllables in the major mode. Scale-degree $\hat{1}$ is *do*, $\hat{2}$ is *re*, $\hat{3}$ is *mi*, $\hat{4}$ is *fa*, $\hat{5}$ is *sol*, $\hat{6}$ is *la*, and $\hat{7}$ is *ti*. However, in minor, the syllables differ. *Do*-based minor (or parallel solmization) emphasizes a parallel relationship between different modes with the same tonic. In this system, the syllables of a natural minor scale are *do-re-me-fa-sol-le-te-do*. In contrast, *la*-based minor (or relative solmization) emphasizes a relative relationship between major and minor. In this system, the syllables of a natural minor scale are *la-ti-do-re-mi-fa-sol-la*.

Some advantages of movable *do* with *do*-based minor are that the system aids in understanding scale-degree function by associating the syllables with scale-degrees (Larson 1993b, 115; Telesco 1991, 181), it reinforces the study of tonal harmony, and it reinforces relative pitch (Taggart and Taggart 1994, 203-204). Other advantages are that transposition is easy, the tonic is always *do*, and chromatic pitches use different syllables. Music of the common-practice period works very well for a parallel movable-*do* system because most of that music emphasizes scale-degree function. The parallel movable-*do* system also works well in music that exploits parallel relationships. Some disadvantages are that theoretical training is necessary before use of the syllables, altered syllables are necessary to sing modal music or music in a minor key, it is more challenging with highly chromatic music or modulations, and it does not explicitly model atonal music.

Movable *do* with *la*-based minor emphasizes relative relationships and the diatonic collection rather than parallel relationships and functional scale degrees. Houlahan and Tacka's (1990b) model shows teaching approaches using *la*-based minor

for colleges. Their model closely resembles Kodály's method as taught to elementary children but applied to college students.⁴ They recommend teaching new patterns by rote before reading from notation. Similar to Kodály, they begin with folk music of the home country (pentatonic melodies), then folk songs of other countries along with great art music using movable *do* solmization with *la*-based minor. They incorporate other systems such as the German style of letter names to aid in reading of all clefs and hand signs.

The following advantages of using movable *do* with *la*-based minor are often cited: it only requires theoretical knowledge of major key signatures and modulations to relative keys can be accomplished easily (Gordon 1993, 286); intervallic relationships between the syllables remain constant (Adám 1971, 8); relative solmization reinforces relative pitch (Buchanan 1946, 19); *mi-fa* and *ti-do* are always half steps (Taggart and Taggart 1994, 202); and it coordinates with the music education curricula (Taggart and Taggart 1994, 202). Proponents of *la*-based minor make some controversial claims. They say it encourages functional listening (Houlahan and Tacka 1992, 141-143; Nemes 1995, 27; Taggart and Taggart 1994, 202), but *do* functioning as tonic in major and as mediant in minor weakens this claim. Curwen (1892) wrote that the syllables correspond to mental effects where *do* is strong or firm, *re* is rousing or hopeful, *mi* is steady or calm, *fa* is desolate or awe inspiring, *sol* is grand or bright, *la* is sad or weeping, and *ti* is piercing or sensitive (pp. viii-ix). However, Simpson (1981) writes that these mental effects do not match everyone's perception of the notes (pp. 111-112) and said that "[Curwen] himself regarded these descriptions as neither precise nor absolute" (p. 112).

⁴ Zoltan Kodály developed the Kodály method in order to teach music literacy to Hungarian children. His method primarily uses relative movable *do* solmization and it incorporates other systems such as the German style of letter names to aid in reading of all clefs and hand signs. The German style of letter names is a fixed system. In the German style, the pitches in a C-natural scale are C-D-E-F-G-A-B-C, the pitches in a C# scale are Cis-Dis-Eis-Fis-Gis-Ais-Bis-Cis, and the pitches in a C-flat scale are Ces-Des-Es-Fes-Ges-As-Bes-Ces. The altered pitches are one syllable each, which avoids additional rhythms.

Some disadvantages are that relative movable *do* does not handle modulation or highly chromatic music well. There is confusion that *do* is not always tonic and it is difficult to sing pieces with parallel key relationships (Taggart and Taggart 1994, 202). This system requires multiple sets of syllables to represent the same function—one for major, one for minor, and one for each mode (Larson 1993b, 113; T. Smith 1987, 22; Telesco 1991, 181). Proponents of both *la*-based minor and *do*-based minor, Curwen and T. Smith argue that the minor mode is not independent of its relative major when using a relative solmization system (Curwen [1875] 1986, 135; T. Smith 1991, 13).

There are a few advocates of *la*-based minor who use *do*-based minor syllables for music that emphasizes parallel relationships. Lendvai's (1983) book provides examples of Kodály using *ma* (or *me*) in pieces that begin in major and borrow from the parallel minor, e.g. the syllable *ma* occurs for a minor tonic chord in a Bartók excerpt (p. 290). Alternatively, Lendvai describes using *di* in a piece that begins in a minor key and borrows elements from the parallel major (p. 140). Houlahan and Tacka's (1994) article also describes students using the same syllables that *do*-based minor students use (pp. 224-225). Music educator John Taylor (1896-97) described using both *la*-based minor and *do*-based minor solmization systems depending on whether the music is diatonic or uses mode mixture. For early music based on the modes, Taylor used *la*-based minor. However, for music that contains an alternation between parallel major and minor tonics (some written as early as the seventeenth century), Taylor found *do*-based minor to be an effective system (p. 35). There are a few advocates of *la*-based minor who suggest that *la*-based minor works well for children and that they can switch to *do*-based minor later. The Educational Council (1925) favored using relative movable *do* for children and wrote that "if children have really become thoroughly familiar with the tonal effects of the minor mode through the relative minor approach, they have no particular difficulty in switching over to the tonic minor system when they elect courses in harmony in the high school" (pp. 66-67).

Singing on numbers is also a movable system. The numbers one to seven are applied to the scale-degrees, with the tonic called $\hat{1}$.⁵ The advantages of numbers are that students are already familiar with the numbers and they aid in the development of relative pitch. Leonard (1953) wrote that numbers aid in the understanding of scale-degree function (p. 54). Taggart and Taggart (1994) claim that scale-degree numbers help students understand functional harmony (p. 205). Similar to movable *do*, numbers work well with music of the common-practice period, but do not explicitly model atonal music.

The disadvantages of numbers are that no widely-used system to chromaticize numbers exists and the intervallic distances between numbers change (e.g., scale-degrees $\hat{1}$ and $\hat{3}$ are either a minor or major third apart). In addition, the consonant-vowel combinations are inconsistent. Some end with consonants, others end with vowels. One begins with a vowel. Numbers are awkward to sing. Manoff (2001) describes one solution to the problem concerning chromatic alterations. He suggests pointing up or down when singing chromatic alterations (p. 274). However, this is not a widely-used method.

The final sight singing system that this dissertation examines here is the use of neutral syllables. In one approach to neutral-syllable singing, singers use the syllable *la*. The benefits of using *la* are that the vowel sound is good for the voice, the syllable is easy to learn (Murphy 1950, 47), and the students are not dependent on the syllables (Curwen [1875] 1986, 92). Robinson and Winold (1976) claim that neutral syllables allow students to sing more legato and expressively (pp. 246-247).

Disadvantages of using neutral syllables are that relative thinking is not emphasized, note reading is not encouraged, and instructors do not know if students have understanding or are just singing along (Robinson and Winold, 1976, 246-247). A solution to that problem is to learn a fixed and a movable system before switching to

⁵ Winnick (1987) describes a hybrid of the numbers method where scale-degree one in minor is called *six*, but that is not a widely-used method (p. 24).

neutral syllables. Some instructors such as Thomson (1981) recommend using the syllable *la* after learning a fixed or movable system so that the syllables are not a crutch (p. ix).

Sight singing using intervals is an option to use concurrently with any of the methods listed. This method involves learning the names of the intervals and learning the sounds of each interval. Danhauser, Lemoine, and Lavignac (1910-13) present intervals from small to large. Adler (1997) contains “newly composed melodies with rhythm that concentrate on the particular interval under study....They should be practiced carefully and sung at first purely by interval” (p. xi). A common method of instruction is to associate intervals with familiar tunes. Rogers (2004) claims that there is a problem with this method: specific intervals occur between different scale degrees and have multiple functional possibilities (p. 106).

Some writers cite advantages in using intervals: They help with modulations, chromatics, and atonality (Wedge 1922, 9); no tonal foundation is required (Byars 1996, 22); and advocates of the interval approach believe that once intervals are mastered, all styles of music can be sung (Robinson and Winold 1976, 248-250). However, Robinson and Winold then claim that singing pitches by intervals can be unmusical.

Other writers note further disadvantages: T. Smith (1987) writes that intervals sound different in different contexts. Barnes (1960) finds that training in intervals does not help students sing those same isolated intervals in context. Barnes researched the effects of interval drill on forty-six students enrolled in a Music Theory II class at Indiana State Teachers College during 1958-1959. He observed that the ability to sing intervals did not reflect an improvement in sight singing melodies composed of those same intervals (p. 83). Thompson (2004) identifies successful and unsuccessful strategies that students use in sight singing. She finds that the most successful students use a combination of functional thinking and intervallic thinking.

Numerous theorists such as Karpinski (2000a), Bridges (1982), and Levin and Martin (1988b) recommend the use of both a fixed and a movable system. There are benefits to each system that the other does not provide. In learning both systems, students are better equipped because they have the strengths of each system and therefore have more tools that they can use in approaching music. However, the theorists caution that different sets of syllables should be used for each approach (Karpinski 2000a, 90; Bridges 1982, 11; Levin and Martin 1988b, 9).

It is important for instructors to understand the goals of solmization systems and with what types of music they work best because it helps them to maximize the strengths of their preferred system and adopt other methods to strengthen the weaknesses. Movable systems emphasize tonal function and the unique quality of each scale-degree, whereas fixed systems emphasize absolute pitch names. Within the movable systems, *do*-based minor emphasizes parallel relationships and *la*-based minor emphasizes relative relationships. Movable *do* with *do*-based minor is a system that directly models scale-degree function (Telesco 1991, 181; Karpinski 2000, 86; Larson 1993b, 115). Rogers (2004) writes “This [movable] method stresses the development of hearing skills rather than music reading skills” (p. 133). Parallel movable *do* works well with tonal music, with its strong sense of scale-degree function. It does not work as well with post-tonal music where functional relationships do not occur.

Concerning relative movable *do*, Demorest (2001) claims “Systems with movable syllables are primarily concerned with establishing tonality (major and minor) and the consistency of pitch relationships within a tonal framework” (p. 38). In relative movable *do*, half steps remain between *mi-fa* and *ti-do* in all modes. Each solmization syllable has the possibility of being tonic depending on the mode. This system emphasizes the uniqueness of each scale type through the use of different syllables for tonic depending on the mode. Larson (1993) and Telesco (1991) find that relative movable *do* requires at least two sets of syllables to represent the same function: one for major and one for minor

(Larson 1993, 114; Telesco 1991, 181). The only case where two sets of syllables are not required is if the system gives the same syllable to the same sound. In referring to modal and folk repertoires, Larson (1993) thought that “in such repertoires, there is not a strong sense of scale-degree function...one only has a sense of where one is within the diatonic collection...Common-practice tonal music with its strong sense of scale-degree function is not such a repertoire” (p. 115). Similar to *do*-based minor movable *do*, *la*-based minor does not work well in post-tonal music. It works well in modal and folk music.

Fixed systems emphasize absolute pitch names rather than tonal function and the unique quality of each scale-degree. Some fixed-system instructors use scale-degree numbers (a movable system) to encourage the development of tonal function recognition. Using pedagogical methods from the opposite system can strengthen the weaknesses inherent within each. Ottman and Rogers (2014) write that “[Fixed systems] can be used equally well for tonal, post-tonal, and modal music” (p. 400).

Table 2.1 compares the main strengths and weaknesses of fixed and movable systems.

Table 2.1: Strengths and weaknesses of various solmization systems

	Movable <i>do</i> (<i>do</i> -minor) and scale-degree numbers	Movable <i>do</i> (<i>la</i> -minor)	Fixed <i>do</i> / Letter names	Neutral syllables
Does the solmization system model tonal function?	Yes	Yes	No	No
Does the solmization system model scale-degree tendencies?	Yes	No	No	No
Does the system emphasize absolute pitch names?	No	No	Yes	No
Is the system easy to use (meaning that fewer than 8 syllables are necessary for singing chromatic music)?	No	No	Yes	Yes
Does the system work well for all genres of music?	No	No	Yes	Yes

In summary, it can be deduced that the strengths of one solmization system tend to be the weaknesses of the other system. Overall, the movable method stresses hearing tonal function and fixed systems emphasize absolute pitch names. Parallel movable *do* works well in tonal music, relative movable *do* works well in modal and folk music, and fixed *do* works equally in tonal, modal, folk, and post-tonal music.

CHAPTER III

APPLICATION OF SOLMIZATION

Research shows that colleges in the United States use movable systems most often, whereas a small number use fixed systems (Pembrook and Riggins 1994; Taggart and Taggart 1994; More 1985, 17; Collins 1979). Collins (1979) describes the results of a survey that she sent to 346 institutions holding full membership in the National Association of Schools of Music which offer both performance and music education degrees. She received 233 responses discovering that, as of 1979, the most commonly-used system was movable *do*, followed by neutral syllables, then numbers, and fixed *do*. She did not differentiate between *do*-based minor and *la*-based minor. In 1990, Pembrook and Riggins sent surveys to 908 colleges or universities in the US that offer any type of baccalaureate degree in music and received 336 responses. Respondents had the option of choosing multiple solmization systems when asked which system(s) they use, not which system they prefer. Therefore, one should interpret the results with caution, because the results do not reflect the most commonly preferred system. Since respondents chose multiple systems and the calculations used by the researchers just used the number of respondents, the percentages total more than 100 percent. They found that most instructors used scale-degree numbers (45%), followed by neutral syllables (37%), *do*-based minor movable *do* (35%), *la*-based minor movable *do* (30%), inflected letter names (12%), fixed *do* with chromatic inflection (10%), non-inflected letter names (7%), fixed *do* without chromatic inflections (6%), scale-degree numbers in which 1=tonic in major and 6=tonic in minor (5%), and other system (3%). Taggart and Taggart (1994) describe the results of a survey that they sent to 239 four-year music degree-granting institutions listed in the College Music Society's *Directory of Music Faculties in Colleges and Universities, U.S. and Canada* (1990-1992). They received 183 responses and found that the preferred system was movable *do* with *la*-based minor, followed by movable *do* with *do*-based minor, then numbers, and fixed *do*. Myers (2008) describes a

survey that he sent to college or university choral conductors who were active members in the southern division of the American Choral Directors Association inquiring about the solmization system(s) in use. As of 2008, most directors sometimes or often used scale-degree numbers (62.2%), then movable *do* with *la*-based minor (51.4%), intervals by tune (48.6%), neutral syllables (43.9%), and movable *do* with *do*-based minor (38.6%). Low numbers were reported for the use of fixed systems. Rogers and Gordon both indicate that movable *do* with *do*-based minor is in greatest use nationally at the college level in music theory classes (Rogers 1997, xviii; Gordon 1993, 269). Overall, the studies show a preference for a movable system.

Even though research in the US indicates a higher percentage of educators using movable systems, some have found it wise to teach both fixed and movable systems. Levin and Martin (1988b) note “Curiously enough, each system provides precisely the benefit that the other lacks” (p. 9). Music educators, K. Brown (2003), Karpinski (2000a), Bridges (1982), McNaught (1892-93), among others, encourage the use of multiple systems, but suggest the use of different syllables for each system. Levin and Martin (1988b) write “In fixed *do*, it is desirable to supplement the use of syllables by singing numbers for scale functions; in movable *do* it is wise to sing letter names of pitches on occasion, so that the student learns the absolute identity of pitches as well as their meaning in a tonal context” (p. 9).

Solmization research fits into three basic categories: (1) articles or books describing the history and use of solmization systems, (2) debates describing strengths and weaknesses of the various solmization systems, and (3) empirical research where various methods are compared. Articles such as Foulkes-Levy (2006), More (1985), and Harris (1918) describe the history of solmization. They begin with mention of early solmization in China, Egypt, or Greece followed by a description of Guido’s hexachordal solmization system of 1030 AD and progressing to modern times. Guido’s movable

solmization system uses the syllables *ut-re-mi-fa-sol-la* from which our current solmization syllables come.

Guido was a monk who worked with a choir at a cathedral in Arezzo. He devised a method of singing with solmization syllables in order to help the choir learn music more efficiently. In Guido's method, the singer learns to recognize and produce the pitches of a hexachord by associating each pitch with a melodic phrase. In the hymn "Ut queant laxis," each line of a melody begins one scale degree higher than the previous scale degree. The text sung at the beginning of each line became the permanent name chosen for the solmization system. The first syllables of each line of the hymn are *ut-re-mi-fa-sol-la*. Guido's system uses a hexachord with the intervals of tone-tone-semitone-tone-tone between adjacent pitches. This arrangement of intervals is found in three locations on the Medieval gamut. It occurs starting on C, F, and G. These hexachords are called natural, soft, and hard respectively. When a singer sings beyond the range of a single hexachord, the singer needs to make a mutation (modulation). The singer treats one of the pitches as a pivot point when changing to a different hexachord. For example, a C major scale is sung as *ut-re-mi-fa-sol-la/re-mi-fa* using hexachordal solmization. It begins using the natural hexachord and mutates to the hard hexachord. The interval between *mi* and *fa* is always a half step in Guido's system. Christiansen (2002) writes that Guido did not permit mutation between B-*fa* and B-*mi* since these were two different pitches (p. 344). Guido's solmization system was widely accepted by other teachers and theorists of the eleventh and twelfth centuries. His system of solmization lasted throughout the seventeenth century and into the next, but the theorists of the seventeenth century tried to improve it because mutation was cumbersome with the extra chromatic pitches that late sixteenth- and early seventeenth-century compositions contained. More (1985) writes "Greater use of transpositions and altered tones made Guido's system far too complicated and solutions were sought by musical thinkers of the time" (p. 9).

The hexachordal system is still in use today. Instructors such as Devore and Lorenz (2000), Killam (1988), and Allaire (1972) suggest using hexachordal solmization syllables for Medieval and Renaissance music. Killam finds that “[Hexachordal] solmization gives students assistance in the performance practice of the music and insight into the solution of some of the problems of facta” (p. 266). The benefits of using the hexachordal system for Medieval and Renaissance music are that it is historically correct and that *mi-fa* is always a half step. However, it is difficult to use with music of the late sixteenth and early seventeenth centuries, common-practice music, and music of the twentieth and twenty-first centuries because that music is chromatic and requires several mutations, which are cumbersome.

According to More (1985), fixed *do* replaced movable *do* in France and became popular in that country after 1600 (p. 11). In an effort to add functional relationships between pitches in France, Galin, Paris, and Chev  came up with a scale-degree number system based on Rousseau’s figure-based notation proposed in 1742. Their method was first made known in *M thode  l mentaire de musique vocale* (1844), published by Chev  and his wife. According to Rainbow (2001) in *Oxford Music Online*, the Galin-Paris-Chev  system used numbers in its notation to correspond to scale-degrees, but used fixed-*do* syllables when singing exercises. Bullen (1877-78) describes the numbers as “inconvenient” and recommends *sol-fa* syllables when using the Galin-Paris-Chev  method (p. 70). In this method, accuracy of singing was aided by preparatory notes; these were notes to be thought of but not sung. For example, if the numbers 5 followed by 2 occur, then a small number 1 precedes the 2. That way, the singer will think where the tonic is and sing a step higher.

From 1600 to the nineteenth century, the English used movable systems. In England, Sarah Glover made improvements to the solmization system—she anglicized the spelling of the syllables, changed *si* to *ti*, and added chromatic syllables, among other

changes. Both the English movable system and the French fixed system have influenced music educators in the US.

One of the earliest solmization debates was between J.J. Fux and Johann Mattheson in 1717-1718, where Fux argued in favor of Guido's six-syllable system and Mattheson favored a seven-syllable system.⁶ Since then, Fuller-Maitland (1921) and Whittaker (1922) debated over the effectiveness of tonic solfa. Siler (1956) and Bentley (1959) debated over fixed and movable *do*. Siler claimed that movable-*do* solmization was the worst because it required students to use multiple systems—movable *do* for vocal music and letter names for instrumentalists. The only advantage of movable *do* from his perspective was that it accounted for chromatic inflection. In an effort to improve fixed *do*, he suggested a fixed-*do* system using chromatic inflection called *safa*. His system accounted for natural, flat, sharp, double-flat, and double-sharp. The natural scale used the syllables *da-ra-ma-fa-sa-la-ta-da*. Pitches raised by half step ended with the vowel *e* (as in *re*), pitches lowered by one half step ended with the vowel *o*, pitches raised by a whole step ended with vowel *i*, and pitches lowered by a whole step ended with vowel *u*. Siler claimed his *safa* system was more suitable to modulation and atonal idioms. His fixed *do* with chromatic inflection was not widely used. In response to Siler's statement that modulation was more suitable for users of chromatic fixed *do*, Bentley (1959) claimed that statement was false because modulation was tonal. Bentley found that the mental processes in fixed *do* with chromatic inflections were more difficult. He favored a system that used the same syllables for the same patterns and therefore, he favored movable *do*.

Debates over the effectiveness of solmization systems have continued into the late twentieth and early twenty-first centuries. Lorek and Pembroke (2000a; 2000b) and Rogers (2000) argue over the success of various solmization systems with Lorek and

⁶ The correspondence between Fux and Mattheson can be found in Lester (1977).

Pembrook claiming that all systems are equal and Rogers finding problems with their study; T. Smith (1991; 1992; 1994) and Houlahan and Tacka (1992; 1994) disagree about the usefulness of *do*-based minor versus *la*-based minor. Larson (1993b) also deals with the effectiveness of solmization systems. In all of these exchanges, there are strong opinions without consensus of one system.

Lorek and Pembrook (2000a) compare movable *do*, fixed *do*, and neutral syllables. In their study, students studied sight singing using one of the three methods for a semester; all sections practiced the same melodies. The results at the end of the semester revealed no significant difference between the students in all three sections. Before arriving at conclusions regarding the study, it is important to realize this study did not make any distinction between the goals of a fixed system versus a movable system. It is impossible to know if students used functional thinking in all three groups. However, the authors conclude that no system of solmization is better than any other. In the same article, they mention a similar study of theirs that compared movable *do* to numbers; again, there was no significant difference in the results. Both of those methods are movable methods, which share similar goals. It makes sense that the results are similar. In his response, Rogers (2000) criticizes the design of their study and thinks that they view sight singing as a labeling system rather than a system for establishing tonal bearings. He finds a problem with their conclusion that no system of solmization is better than any other. He thinks that a result of their conclusion will influence some instructors to teach both fixed and movable *do* to the same class using the same syllables for each system. Karpinski (2000a) warns about the problem of using the same sets of syllables for different purposes:

If one chooses movable-*do* to model scale-degree function and fixed-*do* to model letter names, the meanings of the syllables will not be unique. For example, *do* will mean tonic in movable-*do* (but potentially any letter name) while *do* will mean “C” in fixed-*do* (but potentially any scale degree). In a number of (admittedly undocumented) clinical trials, this has proven to be unworkable for

students and instructors alike. Therefore, using the same set of syllables for different purposes must be avoided (p. 91).

Rogers suggests that they need to understand the goals of sight singing and to use a different design for a study that takes those goals into account.

Smith and Houlahan/Tacka's debate spans five articles with Smith arguing in favor of movable *do* with *do*-based minor and Houlahan and Tacka arguing in favor of movable *do* with *la*-based minor. In T. Smith's (1991) first article, he argues that movable *do* with *do*-tonic is the best system. He lists goals for the ideal solmization system: It ought to have analytical orientation, aural orientation, consistency, singability, and stylistic flexibility. He then shows how the other systems do not meet these goals and how *do*-tonic fits the goals he established and is therefore a better system. The other systems do not meet the standards in the following ways: fixed *do* does not reinforce tonal functions; *la*-based minor does not call same structures by the same name, i.e., the dominant is called *sol* in major, *la* in Dorian, *ti* in Phrygian, *do* in Lydian, *re* in Mixolydian, and *mi* in minor; and numbers do not provide different syllables to represent distinctions between modal scale degrees, i.e., the mediant pitch of major and minor scales use $\hat{3}$ to represent a major third and a minor third in each respectively. T. Smith (1991) responds to a criticism that many have of movable *do* systems—movable *do* does not handle modulations or atonal music well. He writes that “the application of movable *do* to atonal and modulating music slows down the reading” (p. 20). However, using movable syllables teaches students to locate the modulation and pivot tone, thereby aiding development of analytical skills. Concerning atonal music, he writes “the average musician performs vastly more tonal music than atonal” and students have “the option of ignoring tonal associations, thinking in the key of C and making the system ‘fixed’” (T. Smith 1991, 21). Houlahan and Tacka (1992) respond in favor of *la*-based minor movable *do*. They claim that music theorists are not concerned with the aural development of students and that they should use solmization systems that are successful

in music education such as movable *do* with *la*-based minor. In 1992, Smith responds that *do*-tonic is a better system and provides criticisms of *la*-based minor. He finds that *la*-based minor is more complex, for example when singing dominant chords in different modes. He criticizes their claim that analysis is not necessary when singing in *la*-based minor. He finds that analysis is necessary and that two languages are learned when singing *do*-based major and *la*-based minor syllables. Houlahan and Tacka (1994) respond to Smith by giving details of the *la*-based minor system. They include student responses to two melody endings provided by Smith (1992)—*sol-do-re-do-ti-do-la-sol* and *sol-do-re-do-ti-do-le-sol*. Students' responses for melody two are *sol-do-re-do-ti-do-le-sol*, *mi-la-ti-la-si-la-fa-mi*, and *re-sol-la-sol-fi-sol-me-re*. The students were capable of using the altered syllables with *do* as tonic and they suggested other locations in the scale where those intervallic combinations occur. In T. Smith's final article in this debate in 1994, he reiterates his view that "the *do*-tonic system is oriented more toward the ear than is *la*-minor" (p. 227).

Larson (1993b) evaluates solmization systems and part of his research compares *do*-based minor to *la*-based minor. He asks the following questions—"Should we use the same syllable for the tonic of major and minor modes or should we use different syllables?" and "Which system requires the students to learn more syllables?" He gives common-practice tonal music examples and compares the number of syllables needed for each according to *la*-based minor and *do*-based minor; overall in the examples he gives, more syllables are required for *la*-based minor than for *do*-based minor. Larson also provides models identifying the number of rules needed and the difficulty of applying those rules to different solmization systems. He indicates that movable *do* with *do*-based minor is the best choice to emphasize scale-degree function. He reveals problems with *la*-based minor, but states that in some applications it is the best system. Larson assumes that most music students study common-practice music with strong scale-degree tendencies. If he had used modal music or folk music without any chromatic pitches, *la*-

based minor would have used fewer syllables. Larson (1993b) concludes that “it is impossible to say—in the abstract—that any one solfège⁷ system is superior to another. Specific solfège systems should be chosen for specific students, for specific educational objectives, and for specific repertoires. And every solfège system has the honor of being the best system for at least one given purpose” (p. 115).

In addition to the debates, there is research comparing fixed and movable systems that reveals mixed results in which some research shows that movable systems are more effective, others show that fixed systems are more effective, and others show that neither is more effective. Studies by Henry/Demorest (1994), Lorek/Pembrook (2000a), and Killian/Henry (1995) show neither a fixed nor a movable system is better. In studies by K. Brown (2001) and Demorest/May (1995), they show which systems are better for certain categories of music. K. Brown’s (2001) research shows that fixed systems are good for pitch labels and movable systems are better for chromatic music. K. Brown observed undergraduate students’ ability to perform diatonic, modulatory, chromatic, and atonal music in his study. His results show “in focusing on pitch alone, the two systems were not significantly different from each other on diatonic, modulatory, and atonal music melodic passages. However, the movable-system students performed significantly better on the chromatic music category” (p. 85). The fixed-system students performed better on label scores for the atonal music category. Demorest and May (1995) find that movable-*do* singers scored higher than fixed-*do* singers in their study. They warn that the results could have been hindered by the skill of the teachers using the different methods. None of the empirical research has truly proved one to be more effective.

Contrary to the results of K. Brown (2001) and Demorest and May (1995), Jou-Lu Hung (2012) concludes that students who use fixed *do* are more successful at singing chromatically complex music than movable-*do* students. Hung’s subjects, college music

⁷ The term, *sofège*, often describes the solmization syllables used in fixed *do*. The usage in this quote applies to all solmization systems.

majors, trained in either fixed or movable *do* and had piano experience before the age of twelve, sight sang melodies with different levels of diatonic and chromatic complexity. She found that the fixed-*do* participants had a higher level of pitch accuracy in all levels of complexity. It is important to note that Hung did not consider the sight-singing level of the subjects prior to the start of college.

CHAPTER IV

SELECTION OF ELEMENTS FOR STUDY AND EVALUATION PROCESS

The process of determining which elements and other topics to research in the textbooks is as follows. Step 1 entailed listing the elements of music. Step 2 involved an evaluation of elements to determine which elements produced observable differences between movable-system and fixed-system books. The elements from Step 1 include pitches, clefs, rhythms, scales, key signatures, major mode, minor mode, modal collections, intervals, and chords. Other topics include solmization syllables notated in the body of the text, goals of the text, styles and genres of music found in the text, tonicization, modulation, characteristics of melodies and tonal patterns, and instructions when teaching particular elements of music such as major, minor, modes, and twentieth-century idioms. The topics that became part of the final list of topics evaluated in the textbooks for this study are pitches, scales, key signatures, major mode, minor mode, modal collections, intervals, chords, solmization syllables notated in the text, goals of the text, styles and genres of music found in the text, tonicization, modulation, characteristics of melodies and tonal patterns, and instructions when teaching particular elements of music such as major, minor, modes, and twentieth-century idioms.

Two elements on the list, clefs and rhythms, were not on the final list of elements observed. Occasionally in this dissertation, clefs receive attention but an evaluation of the particular clefs used in the textbooks selected for this study is not one of the categories because similar clefs occur in movable- and fixed-system books. Some movable- and fixed-system books use more than the standard four clefs (of treble, bass, alto, and tenor), whereas others only introduce two clefs (treble and bass). Movable-system books such as Karpinski and Kram (2017) and Krueger (2017) present treble, bass, alto, tenor, soprano, mezzo-soprano in addition to other clefs. Fixed-system books such as Danhauser, Lemoine, and Lavignac (1910-1913) and Lloyd, Lloyd, and DeGaetani (1980) present those same clefs. Fixed-system book such as Cole and Lewis

(1909) presents only two clefs (treble and bass) as do movable-system books such as Houlahan and Tacka (1991a/b). There is perhaps similar treatment of clefs found in movable- and fixed-system books because they share a common goal of preparing students to sing all music. Rhythm was not part of the study.

This study groups some of the elements of music together rather than individually because they are interchangeable. For example, applied chords, tonicization, and modulation are one category. Some textbooks present one of these categories and others present all of them. These topics often occur in close proximity to each other in textbooks. A second category that groups elements together contains the topics: harmonic context, intervallic context, chords, and pitch-name reading. These topics are similar because fixed books focus on pitch-name reading, whereas movable books focus on harmonic context. A third category that groups elements together is the category: characteristics of melodies and tonal patterns. That category incorporates intervals into it. The other topics (including scales, key signatures, major mode, minor mode, modal collections, notated solmization systems, goals of the text, styles and genres of music found in the text, and instructions when teaching particular elements) receive an evaluation as their own categories. The following chapter, Chapter V, will give a description of pedagogical approaches associated with textbooks subscribing to particular solmization systems of each of the observable topics. Chapter VI evaluates the textbooks based on the criteria laid out in Chapter V. The evaluation identifies the pedagogical method [fixed or movable (differentiating between *la*-based minor and *do*-based minor)] used by each textbook for the selected topics. Following the evaluation of each category, an average is taken of all categories and the results reveal which books use more pedagogical approaches of movable systems and which ones use more pedagogical approaches of fixed systems.

CHAPTER V

PEDAGOGICAL APPROACHES ASSOCIATED WITH PARTICULAR SOLMIZATION SYSTEMS

This chapter will look at how textbooks and articles known to adhere to specific solmization methods teach various elements of music and other features. The elements of music and other features observed are: (1) syllables notated in the body of the text, (2) scales used in the textbook, (3) key signatures used in exercises of the first two pitch-oriented sections, (4) the organization—pitch-name reading, intervallic context, or functional context, (5) characteristics of melodies and tonal patterns used in the first four pitch-oriented sections (6) treatment of minor and modes when introduced, (7) methods for teaching applied chords, tonicization, and modulation, and (8) styles and genres of exercises found in the textbooks.

A brief survey of aural-skills books and articles along with select textbooks will aid in identifying approaches associated with fixed and movable systems. The textbooks used as fixed system model textbooks are Wilhem (1839) and Hullah ([1842] 1983). Blum (1968, 65) wrote that “Wilhem’s two volume *Méthode* demonstrates procedures that have become thoroughly associated with fixed-*do* sight-singing methods.” Hullah presented a method based on Wilhem’s *Manuel Musical* (1836 and later editions) in 1840. He revised it in 1842 and it was reprinted in 1983. It is not a mere translation of Wilhem’s book, but an adaptation for use in English elementary schools; it uses different musical examples and changes the approach from a monitorial teaching system to a teacher alone system. The books used as movable system model textbooks are Houlahan and Tacka (1991a/b) and Karpinski (2017). Even though Karpinski’s *Manual* is not a sight-singing anthology, it claims to adhere to *do*-based minor movable *do* and accompanies the anthology. Therefore, pedagogical teaching suggestions and other features used in it provide suggestions of pedagogical methods used for *do*-based minor movable *do*.

Notated Solmization Syllables

The presence of solmization syllables in a textbook directly identifies that book as following the method identified with the syllables. Many textbooks do not write syllables below the melodies (possibly because the authors do not want to limit the market for their book). Some however indicate syllables. It is important to note that syllables listed in a preface or in an appendix do not receive consideration here. The syllables count here only if they are in the body of the text, since some books list all of the methods most commonly used and a list does not indicate a bias. Some authors use a select few solmization syllables in the body of the textbook, which suggests a preference for those used in the body.

Textbooks favoring fixed systems that include syllables often provide fixed syllables and scale-degree numbers, but will not provide movable-*do* syllables. Textbooks favoring movable systems that include syllables will provide movable syllables, scale-degree numbers, and letter names, but will not provide fixed-*do* syllables. Wilhem (1839) uses fixed syllables at various places and Hullah ([1842] 1983) recommends singing on scale-degree numbers and fixed syllables. Houlahan and Tacka (1991a/b) include relative movable *do* syllables. Karpinski (2017) includes *la*-based minor syllables, *do*-based minor syllables, scale-degree numbers, and letter names. The research cited earlier shows that some prefer a combination of methods. Karpinski (2017) emphasizes movable methods, but includes the fixed system of letter names to strengthen note identification.

Scales

Most fixed-*do* and movable-*do* sight-singing books begin with major scales. Karpinski (2000a) finds it to be a convenient structure with which to begin “because it covers all members of the diatonic collection in scale-degree form and because it is nearly ubiquitously familiar to university, college, and conservatory students” (p. 148).

Differences occur within the movable category because some texts introduce major mode first and others introduce pentatonic melodies as building blocks to major and minor.

Parallel minor-system books frequently introduce major mode followed by minor, and pentatonic. After stating that the remaining discussions employ *do*-based major/minor movable *do*, Karpinski (2000a) describes where to begin a sight-singing curriculum. He recommends beginning with the major scale, scale patterns, and sequential patterns (p. 148).

Relative minor-system books commonly introduce pentatonic as building blocks to major scales. Houlahan and Tacka (1992) present a sequence of melodic elements taught in ear training. Their article lists *do*- and *la*-centered pentatonic melodies first, followed by major scales, minor scales, and then modes (pp. 142-144). Houlahan and Tacka (1991 a/b) state that their method “is based on the Kodály concept” (p. 2). Kodály’s method is influential over the methods used when teaching relative movable *do*. His method for children traditionally begins with the minor third leap between *sol* and *mi* and expands to include *la*, *do*, and *re*—members of the pentatonic scale. Houlahan and Tacka (1991a) begin with leaps between movable syllables *sol* and *mi*. Choksy (1981) finds that older students become bored with the focus on *sol-mi* and recommends using pentatonic melodies that emphasize *mi*, *re*, and *do* rather than only focusing on *sol-mi* (p. 59). Besides starting with the pentatonic scale, some proponents of relative minor advocate using the pentachord. Winters (1970) finds that English music emphasizes tonic and dominant rather than pentatonic harmonies. He suggests that students learn the tonic triad first filling in *re* and *fa* (p. 19) thereby beginning with the pentachord. In summary, *do*-based minor books introduce major, followed by minor, and modes and pentatonic scales often occur later. *La*-based minor books introduce pentatonic or pentachord melodies first, then major, minor, and modes occur later.

Books known to adhere to certain methods present those particular scales. Proponents of relative movable *do*, Houlahan and Tacka (1991a) introduce pentatonic as

a building block to understanding major. The fixed books of Wilhem (1839) and Hullah ([1842] 1983) and the movable book of Karpinski (2017) all present major first followed by minor. Wilhem's textbook contains major-key exercises (no minor ones) in Tableaus 1-24 out of 73 (almost one-third).⁸ Minor first occurs in Tableau 25. Hullah's ([1842] 1983) book consists of two courses of material in 50 chapters—the first course presents diatonic exercises in the key of C major. In the second course, minor occurs in Chapter XXXVI. Karpinski's (2017) book, which has 79 chapters, uses major melodies through Chapter 16 and introduces minor in Chapter 17, and pentatonic melodies in Chapter 28.

Key Signatures

Key signatures used in the earliest two pitch-oriented chapters differ between the methods. Hung (2012) describes keys with sharps and flats as having a higher cognitive load, which therefore makes them more difficult for fixed-system users (p. 36). As such, books geared toward beginners learning fixed *do* use beginning melodies predominantly in the key of C major before gradually introducing new key signatures. In Wilhem's (1839) book, C major exercises occur in Tableaus 1-24 and 26-28, A minor and C minor occur briefly in Tableau 25, F major and G major in Tableau 29, D major in Tableau 37, B-flat major and A major in Tableau 48, D minor, E minor, and B minor in Tableau 56, G minor in Tableau 64, and E-flat major in Tableau 73. His text contains melodies in C major for more than one-third of the book (27/73 tableaus) and progresses to three sharps or flats in the key signatures. Hullah's ([1842] 1983) book contains exercises in C major through Chapter XXXII. Then in Chapter XXXIII, exercises occur in G major, followed by D major and A major. In Chapter XXXV, melodies occur in F major, followed by B-flat major, and E-flat major. The ordering of keys is slightly different between the two,

⁸ Wilhem refers to section divisions of these volumes as tableaus.

but they both begin with C major melodies and mainly add one sharp or flat at a time to the key signature.

Books geared toward learning movable *do* often use melodies in any key from the beginning because key signatures with sharps or flats are the same difficulty level as no sharps or flats for movable-system users. Some movable books introduce melodies first in C major before they introduce other keys that contain (1) various sharps or flats or (2) a systematic introduction of sharps and flats. The latter option appears similar to fixed *do*; a difference that occurs is that all key signatures occur in a short span in movable books. Karpinski (2017) introduces melodies early in the book using protonotation, a method that notates pitch using scale-degree numbers and movable-*do* solmization syllables and rhythm using vertical lines to represent beats and horizontal lines to represent durations. The protonotation melodies do not indicate a key, so students can sing in any key. In the *Anthology* that accompanies the *Manual*, Karpinski and Kram (2017) present exercises in C major in Chapter 2 and exercises in all fifteen major keys in Chapter 3. This book seems similar to the fixed approach of introducing melodies in the key of C before introducing other keys. However, it is important to note that the protonotation melodies found in the *Manual* can be sung in any key and that all major keys occur in the second pitch-oriented chapter in the *Anthology*. Houlahan and Tacka (1991a) first introduce melodies using stick notation, a staffless notation that uses solmization syllables to represent pitch and rhythmic symbols to represent durations. The stick notation melodies can be sung in any key. On the first page that introduces staff notation (p. 26), the first melody is in F major followed by A major. Note that they are not in C major (the key in which most fixed textbooks begin). Greater number of sharps and flats in key signatures is more difficult for beginning fixed-system users. Therefore, this text is more appropriate for movable-*do* students.

In summary, some fixed and movable systems introduce melodies in C major at the beginning. A difference between the two systems is that when other keys occur in

movable-system books, the authors introduce the keys more quickly than fixed-*do* books do. Overall, fixed-system books begin in C major and systematically introduce new key signatures gradually, whereas some movable-system books introduce keys in a random order rather than a systematic order (meaning that new keys differ by more than one accidental from the previous key). Other movable-system books present keys in a systematic order, but the introduction of new keys occurs quickly (perhaps 1 or 2 melodies per new key and all keys occur by the second or third pitch-oriented chapter).

Organization

Certain organization and ordering of materials are common within fixed and movable solmization systems. Karpinski (2000a) states “fixed-*do* instruction would focus more closely on such skills as pitch reading, clefs, and transposition” (p. 147). Ottman and Rogers (2014) concur that fixed systems encourage clef-reading skills (p. 410). Regarding movable systems, Karpinski (2000a) writes that “movable-*do* would focus more on tonic inference, scale-degree function, and the like” (p. 147). Rogers (2004) states that movable-*do* method assigns syllables by function. He writes

This method stresses the development of hearing skills rather than music reading. Through association with the syllables, over a period of time, students gradually become tuned in to the nuances, directional tendencies, and structural relationships of tonality independently of particular keys or notational configurations. All keys, then, are treated, through transposition, as one, and the learning of the system becomes the goal rather than reading notes (p. 133).

Therefore, movable-system writers focus on harmonic context of the notes. Recent books biased toward fixed systems use chapter headings that indicate organization around pitch-name reading, whereas books favoring movable systems use chapter headings that indicate organization around harmonic context. This does not mean that users of fixed systems do not find harmonic material important or that users of movable systems do not value pitch-name reading. Another chapter heading that is common in the organization

of textbooks is intervals; they are ubiquitous in many textbooks whether they are movable or fixed. For instance, Benward (1989b) and Adler (1997) emphasize intervals in their organization. However, a difference can occur concerning the treatment of intervals in fixed-system books. Blum (1968) wrote “The teacher who subscribes to the fixed solmization usually concentrates on teaching the sound and look on the staff of separate intervals. In order to carry this approach to its logical conclusions, the intervals must be presented in non-tonal as well as tonal settings” (p. 90). Diatonic and chromatic pitches in a fixed system do not require the use of chromatic syllables, whereas those pitches require that movable-system users need to use extra solmization syllables, which is more difficult for students of movable methods. Therefore, if intervals occur in both tonal and non-tonal contexts when first introduced, fixed approaches are present.

Hullah ([1842] 1983), fixed *do* book, uses chapter titles emphasizing intervals and pitch-name reading but none emphasizing harmonic topics. A great percentage of his book emphasizes intervals—32 of the 50 chapters contain an interval name in the heading (e.g., “Unisons and Seconds”) and two other chapters simply list “Intervals” in the heading. His book presents diatonic intervals from small to large in Chapters IX to XXIV and then chromatic intervals from small to large in Chapters XXVII to L. The intervals do not reveal a bias. Other chapter headings aid in identifying the bias: two mention note names or note placement in the heading, four describe major scales, minor scales, or key signatures, and four pertain to rhythm. The lack of harmonic topics and presence of topics such as note names and note placements and the systematic order of key signatures suggest a fixed-system preference. Likewise, Wilhem’s (1839) textbook emphasizes intervals and pitch-name reading. It first covers the intervals from small to large in a diatonic context, then it goes through them a second time covering intervals from small to large in a chromatic (non-diatonic) context covering intervals for 34 out of 50 chapters. Similar to Hullah, he also emphasizes note-name reading with headings

such as “Names and Shapes of Notes,” “Places of Notes,” “Sharps and Flats,” and “Use of Clefs.” There is no mention of harmonic context in his chapter headings.

Movable *do* proponent, Karpinski (2017) writes “This book downplays interval work in favor of functional approaches” (pp. xiii-xiv). His text emphasizes organization around harmonic content. His book devotes a chapter to each diatonic chord and to chords applied to a single scale-degree, e.g., in the chapter titled “Chords Applied to the Dominant,” he presents the applied dominant and applied leading-tone chords to the dominant. Houlahan and Tacka (1991a/b) list relative movable *do* solmization in the chapter headings of their book starting with a leap between *sol* and *mi*. Tonic, dominant, and subdominant chords appear as subject headings in Volume 2. They focus on functional approaches.

Characteristics of Melodies in Earlier Chapters

Gordon (1993) finds “it easier for students to perform tonal patterns that incorporate smaller intervals” (p. 186) and more difficult to perform larger intervals. Therefore, the melodies at the beginning of movable and fixed system books tend to be diatonic and stepwise. Many contain intervals as well, but the methods differ concerning what intervals occur. As cited above, Blum (1968) wrote “The teacher who subscribes to the fixed solmization usually concentrates on teaching the sound and look on the staff of separate intervals. In order to carry this approach to its logical conclusions, the intervals must be presented in non-tonal as well as tonal settings” (p. 90). That suggests that some fixed books present both tonal and non-tonal melodies emphasizing specific intervals early in the book. Therefore, the melodies at the beginning of fixed-system books are often diatonic, stepwise, and outline specific intervals. Movable systems of *do*-minor and *la*-minor often differ in their approaches. *Do*-minor proponent, Karpinski (2000a) recommends beginning with the major scale, scale patterns, and sequential patterns (pp. 148-149). He suggests singing scalar patterns and outlining tonic and dominant when

establishing collection and tonic (p. 153). *La*-minor proponents, Houlahan and Tacka (1990a) recommend beginning with pentatonic patterns starting with outline *sol-mi*, followed by *sol-mi-la*, *do-re*, and the pentatonic scale. *La*-minor proponent, Winters (1970) finds that English music emphasizes tonic and dominant rather than pentatonic harmonies. He suggests that students learn the tonic triad first filling in *re* and *fa* (p. 19) thereby beginning with the pentachord. Therefore, both *do*-minor and *la*-minor books emphasize outlining tonic chords, but *la*-minor books exclusively outline the pentatonic chord.

Hullah's ([1842] 1983) book presents stepwise melodies for the first three chapters followed by diatonic intervals taught from small to large. Likewise, Wilhem's (1839) textbook also contains stepwise exercises in earlier exercises followed by ones emphasizing diatonic intervals from small to large. These fixed books contain stepwise melodies and ones that emphasize specific intervals early in their textbooks.

Houlahan and Tacka (1991a), *la*-based minor book, emphasizes intervals outlining *sol-mi*, followed by *sol-mi-la*, and then *do-re*. Their textbook emphasizes intervals found in the pentatonic scale. Karpinski's (2017) book emphasizes stepwise patterns and ones outlining the tonic triad.

Minor Mode

The introduction of minor mode melodies almost always follows major mode melodies in sight-singing textbooks favoring either fixed or movable solmization systems. As cited above, Karpinski (2000a) notes that major scales are convenient to begin a curriculum, thereby placing minor later in the curriculum (p. 148). In textbooks favoring fixed *do*, minor follows major using either a relative or a parallel approach. Fixed-system books favor using fixed syllables. Fixed-system writers, who encourage using a movable system in addition to a fixed system, use scale-degree numbers and

fixed-*do* syllables.⁹ One unique feature of this category in fixed-*do* books is that accidentals or key signatures occur in a systematic way. Hullah's ([1842] 1983) book presents minor by simply defining the intervallic content of the scale and then describes parallel and relative relationships. His book recommends singing with numbers and with syllables (p. 116). Exercises in the parallel minor of C major (C minor) occur in Chapter XXXVI and in the relative minor of C major (A minor) in Chapter XXXVII. Even though Hullah's book identifies all minor keys in Chapter XXXVII, they do not occur in exercises or melodies of that chapter. B minor occurs in Chapter XLVI, but no other minor keys occur in the melodies. The limited number of minor keys in this book does not fully show how minor often occurs in fixed-system books. Wilhem (1839) introduces minor in Tableau 25 presenting various minor keys, but only provides exercises in the parallel and relative minors of C major (C minor and A minor respectively). Later, he presents A minor followed by D minor, E minor and B minor in Tableau 56 and he introduces G minor in Tableau 64. No other minor keys occur in exercises. The order of key signatures primarily adds one sharp or flat to each new key (the only exception is C minor). Fixed-*do* books often present minor keys in a systematic order.

Within the movable category, there are three main approaches: *la*-based minor, *do*-based minor, and numbers. The introduction of the minor mode is different in each system. Some *la*-based minor books introduce minor mode by first using pentatonic melodies that leap down to *la* before introducing a minor scale. Those books favor a relative approach, whereas *do*-based minor books frequently introduce minor mode as a minor scale (not pentatonic) and favor a parallel approach. Houlahan and Tacka (1994), proponents of relative movable *do*, describe the sequence taught in their course:

⁹ Writers who emphasize using both movable and fixed systems such as Levin and Martin (1988) recommend using different syllables for each. In fixed *do*, that means fixed *do* syllables for a fixed system and scale-degree numbers for a movable system.

Pentatonic motives, hemitonic and anhemitonic pentatonic scales and modal scales are taught before the presentation of major and minor tonalities. Within the pentatonic system we use the notes *d-r-m-s-l* to create the following scales: *do* pentatonic, *re* pentatonic, *mi* pentatonic, *so* pentatonic, and *la* pentatonic. With the introduction of modal scales, students are taught to hear the tonic for each of the modes...Following this sequence, once major and minor tonalities are introduced, students logically hear centeredness in a tonic with *do* for major and *la* for minor (p. 222).

Their description concludes by emphasizing that students taught relative movable *do* should hear *la* as a resting tone in minor and *do* as a resting tone in major. These syllables have different functional possibilities depending on the mode, which presents an additional difficulty for relative system users. Perhaps for that reason, minor often occurs in a chapter separate from major when first introduced in books favoring relative minor. Due to that fact, neither a parallel nor a relative relationship occurs between melodies. If syllables occur in the text, the syllables are relative syllables. Houlahan and Tacka (1990a) note “With the introduction of low *la*, the students must aurally discern whether a composition containing the elements *l-s-m-r-d-l*, is *do* centered or *la* centered; major or minor. This presupposes no theoretical understanding of major or minor scales but is dependent on aural analysis” (p. 248). At this point in their curriculum, neither major nor minor scales have occurred, only pentatonic scales. Their focus is on aural recognition of major and minor before introducing them as topics. When minor occurs in Houlahan and Tacka (1991b), it occurs in a chapter that contains no major-mode melodies. Their book lists solmization syllables reflective of a relative system, *la-ti-do-re-mi-fa-sol-la* (p. 83). Houlahan and Tacka (1990a) note that there are different functions created using the same syllables—“The function of *ti* is different in major and minor scales. In the minor scale, *ti* is not a leading tone as it is in the major scale” (p. 250).

Proponents of *do*-based minor emphasize parallel relationships. Karpinski (2017) introduces both relative and parallel syllables when minor mode occurs in the *Manual*. However, Karpinski mentions in the introduction that his book is not a relative minor

book. The *Manual* does not present pentatonic as a step to understanding minor. Karpinski and Kram's (2017) *Anthology* contains a major melody sharing a parallel relationship to a minor melody i.e., excerpt numbers 297 and 298 are in E minor and E major respectively. There are none sharing a relative relationship in the anthology chapter introducing minor mode.

Modal Collections

The introduction of modes in the various methods is different. In most of the textbooks, modal collections occur following major and minor. Some textbooks present modal collections in the first chapter. This early use of modes suggests a fixed-*do* or a relative movable-*do* approach because early use of modes in parallel movable system classrooms is very difficult for beginning students due to the extra chromatic syllables. Murphy, Phillips, Marvin, and Clendinning (2016b) find that using parallel syllables requires that students "assign chromatic solfege syllables to pitches that often appear without a written sharp or flat" and those who use relative syllables are using a method that is "often easier for reading modal melodies because there are no chromatic syllables to assign to notated pitches" (p. 65). Gordon (1993) agrees that parallel syllables are more difficult than relative syllables because parallel syllables require students to learn chromatic syllables to sing in tonalities other than major (p. 269). In fixed systems and possibly relative movable systems (as long as the pitches are diatonic), no new chromatic syllables occur in modal melodies.

It is difficult to detect biases in fixed-system textbooks when introducing modes because some do not include modal melodies. Others that include them introduce them in one of the following ways: in a systematic order, place them in an appendix, and/or take a general approach of identifying the intervals within the mode. The systematic order indicates a fixed approach, but the others do not indicate a movable or fixed method. Use of fixed syllables is an indicator of a fixed-system preference. Fixed-

system books will use either a relative or a parallel approach. Wilhem (1839), fixed-system book, presents modes in the supplementary exercises at the end of Volume 1 (p. 195). His book lists the eight church modes indicating the final and reciting tone of each. That does not indicate a bias toward any solmization method. Hullah ([1842] 1983) does not include modes.

Books favoring relative or parallel movable systems often present them differently. In some *la*-based minor books, prior to the introduction of modal collections, subsets occur as pentatonic scales starting on different scale degrees, e.g., pentatonic on *re*, pentatonic on *mi*, etc. and then each mode occurs in separate chapters. In the instructions, some *la*-based minor proponents indicate that key signatures determine the syllables solmized and/or they provide relative movable syllables. Houlahan and Tacka (1991b) present pentatonic scales starting on different scale degrees and later introduce the modes of Dorian, Mixolydian, and Aeolian with each mode occurring in different chapters. The page introducing each mode provides the relative syllables plus the syllables for a comparative scale. In determining the syllables of a comparative scale, they characterize the modes as a major or a minor type. Dorian is a minor type. The comparative scale of Dorian is *la-ti-do-re-mi-fi-sol-la*; it is a *la*-based Dorian. The typical syllables used in relative movable *do* for Dorian is *re-mi-fa-sol-la-ti-do-re*.

In *do*-based minor, the modes occur using either parallel or relative relationships, but often emphasizing parallel relationships and function. Karpinski (2017) presents modes in both relative and parallel relationships. His book indicates the advantages and disadvantages of using relative versus parallel syllables. Karpinski (2017) notes, “With relative solmization, each mode will require you to associate the scale degrees with different sets of syllables” (p. 238). With parallel solmization, “If you label the tonic or final in all parallel modes as scale degree 1/*do*, similar syllables will reflect similar functions” (p. 246). That indicates a parallel movable system preference.

Applied Chords, Tonicization, and Modulation

The introduction of applied chords, tonicization, and modulation in fixed-system books is not obvious because these topics do not frequently appear as subject headings in fixed-system books. With no subject headings, instructors must search the sight-singing melodies themselves, looking for the outlining of specific chords. Secondary dominants often occur through the systematic introduction of chromatics prior to modulation or in the same chapter as modulation in textbooks favoring fixed systems. Some fixed textbooks describe modulation as a change in tonic, but they do not describe where to change syllables. Middleton (1984) notes that “total attention of the reader can be devoted to correct pitch and intonation, unhampered by a constantly shifting identification process incurred by modulations and key changes” (p. 32).

Wilhem (1839) does not introduce applied chords as a separate topic. Chromatic pitches occur from small to large in the key of C major in Volume one. The melodies that contain chromatic pitches include outlines of secondary dominant chords even though Wilhem does not label them as such. A V7/IV occurs as a fully arpeggiated chord in Tableau 32 on p. 124 of Volume 1. Modulation occurs as a topic heading in Tableau 56 on p. 52 of Volume 2. Nineteenth-century texts often define modulation differently from modern times. For them, modulation is a momentary tonicization, for instance a single applied motion V/V to V is a modulation. Wilhem defines modulation as “The changes of tones and of modes that occur during the course of a piece of music are called modulations; starting from the tone of C we often modulate to F, to G, etc.¹⁰” (Vol. 52, p. 52). That definition does not strongly indicate if he means a change in key or a tonicization. The example that he uses on p. 53 contains a melody that starts in one key (C major) for four measures, followed by a different key (G major) for four measures, a

¹⁰ The original French is “Les changements de tons et de modes qui prevent survenir dans le courant d’un morceau de musique se nomment modulations; en partant du ton d’ut on module souvent en-fa, en-sol, etc” (Vol. 2, p. 52).

return to C major for four measures, A minor for four measures, D minor for three measures, and so forth concluding in a return to the original key of C major. The original key does not receive much emphasis, but the key areas that the melody tonicizes occur for short periods of time as well. One could argue that his examples contain tonicizations rather than modulations. If that is the case, modulation does not occur in his text. Similarly, Hullah ([1842] 1983) does not introduce secondary chords as a separate topic. In Part two in Chapters XXVIII to L, he presents chromatic intervals from small to large. Chromatic pitches in duet melodies as early as Chapter XXIX contain secondary dominant chords. Some melodies briefly tonicize a different key area or contain mode mixture, but there are no modulating exercises. A majority of the chromatic melodies in Chapters XXVIII to L contain fewer than three sharps or flats in the key signatures (only three exercises contain four sharps or flats). A systematic order of chromatic pitches occurs in both Wilhem and Hullah where applied chords happen.

Teaching applied chords encourages functional listening, which is a primary goal of movable systems. Textbooks favoring movable methods often teach the harmonic context of applied chords and modulations, which means they present applied chords to certain scale degrees and modulations to specific key areas. Karpinski (2000a) notes that “many chromatic pitches function as applied pitches” (p. 198). When introducing chromatic pitches, Karpinski (2000a) recommends learning to sing lower chromatic neighbor tones, chromatic passing tones, chromatic prefix neighbor tones, and singing arpeggios of applied dominant and leading-tone chords (pp. 194-198). In his *Manual*, Karpinski (2017) includes a separate chapter for each set of applied chords to each scale-degree. Karpinski (2000a) addresses modulation covering common-tone, gradual, and unprepared modulations. He notes that certain modulations occur frequently in tonal music including “(1) tonic minor to relative major, (2) tonic major to relative minor, (3) tonic to dominant, and (4) dominant back to tonic” (p. 211). Movable-system books often emphasize modulations to specific key areas. Additionally, when modulation

occurs, many authors include directions on when to change syllables or where the modulation precisely occurs. Karpinski (2017) writes “In order to use functional solmization (scale-degree syllables or numbers) for music that modulates, you must change from one tonic and scale to another...you must decide a point at which to make this change” (p. 343). Therefore, some movable-system books present applied chords in separate sections emphasizing the function of each scale degree and some emphasize specific modulations where they give instructions on when to change syllables. An interesting fact about modulation that Karpinski (2000a) notes is “that sight singers who read by tonal function generally make more frequent changes of tonic (and use more fragments of various scales) than one would find in any rigorous academic analysis” (p. 100).

Within the movable systems, *do*-based minor and *la*-based minor textbooks teach applied chords and modulation differently. The functions between syllable names of major and minor remain the same in *do*-based minor. However, they change in *la*-based minor. As cited earlier Houlahan and Tacka (1990a) state “The function of *ti* is different in major and minor scales. In the minor scale, *ti* is not a leading tone as it is in the major scale” (p. 250). Textbooks favoring *do*-based minor frequently present new material in major and minor keys within the same chapter, whereas *la*-based minor books often present material first in a major key before presenting it in a minor key because secondary chords and modulation within each modality create an additional difficulty. Karpinski and Kram (2017) present applied chords using both major and minor keys using up to five flats or sharps in the key signatures. Houlahan and Tacka (1991a/b) do not explicitly teach secondary dominant chords. When modulation occurs, the key signatures contain up to four sharps or flats and almost all exercises modulate from a major key to the major dominant and only one melody modulates from a major key to the relative minor. When modulating to the relative minor using relative movable-*do* syllables, the collection of pitches and syllables remains the same. Relative syllable users

make claims that the function remains the same between the syllables (Byars 1996, 15; More 1985, 9; A. Brown 1974, 55), but that is only the case in music such as folk and Renaissance which does not emphasize tonal function (Karpinski 2000a, 201).

Repertoire

The styles of music used in each textbook are helpful in determining biases. Rogers (1997) writes that *la*-based minor movable *do* works well for modal and folk-song literature and that *do*-based minor works well for tonal music (xviii-xix). Similarly, Karpinski (2000a) notes that relative movable syllables work well with modulations between relative majors and minors in folk music and Renaissance music because “such systems explicitly model the collection rather than any tonal function” (p. 201). He asserts that parallel movable syllables work well in common-practice music because such music “displays similar behavior in moves between relative major and minor keys” (p. 201). Many instructors prefer using functional syllables to model the tonal function. Therefore, when determining a bias in *la*-based minor, there is more folk-song literature than other styles. *Do*-based minor books use more tonal music from the common-practice period as do many fixed-system books. The presence of common-practice music plus the author’s recommendation of functional hearing indicates a movable bias.

Concerning fixed systems, Ottman and Rogers (2014) write that “They can be used equally well for tonal, post-tonal, and modal music” (p. 400). As cited earlier, Blum (1968) wrote “The teacher who subscribes to the fixed solmization usually concentrates on teaching the sound and look on the staff of separate intervals. In order to carry this approach to its logical conclusions, the intervals must be presented in non-tonal as well as tonal settings” (p. 90). If this is the case, then both tonal and non-tonal music occur early in instruction, which implies that there is a higher percentage of chromatic and non-tonal music in fixed-system books than in movable-system textbooks. The only time that a high amount of chromatic and non-tonal music does not indicate a fixed bias is when the

authors explicitly suggest movable solmization in that context. Table 5.1 contains a summary of the previous discussion of how elements of music occur in books favoring certain methods.

Table 5.1: Characteristics of textbooks favoring certain solmization systems

	Movable <i>do</i> (<i>do</i> minor)/ Scale-degree numbers	Movable <i>do</i> (<i>la</i> minor)	Fixed <i>do</i> / Letter names
Notated solmization syllables in body of textbook	<i>Do</i> -minor movable <i>do</i> syllables, scale-degree numbers, and letter names	<i>La</i> -minor movable <i>do</i> syllables, scale-degree numbers, and letter names	Fixed <i>do</i> syllables, scale-degree numbers
Scales	Major → Minor → Pentatonic	Pentatonic or Pentachord → Major → Minor	Major → Minor → Pentatonic
Keys	Any	Any	C major → new key signatures introduced systematically.
Chapter headings favor pitch-name reading or harmonic context	Harmonic context	Harmonic context	Pitch-name reading and/or chromatic intervallic context
Characteristics of melodies and tonal patterns in first four pitch sections	Stepwise and outline tonic triad	Stepwise, leaps in tonic triad, and leaps in pentatonic scale	Stepwise and leaps of a certain interval
Treatment of minor mode	Any key signature. Parallel relationships emphasized.	Introduced in pentatonic scale. Minor scale occurs in separate chapter from major. Relative relationships emphasized.	Minor keys taught in systematic order. Melodies emphasize parallel and relative relationships.
Treatment of modal collections	Emphasize parallel relationships and harmonic context	Subsets of pentatonic scales starting on various scale-degrees taught first before modes. Emphasize relative relationships	Modes occur in relative or parallel relationships. Intervallic methods are possible
Methods for teaching applied chords, tonicization and modulation	Applied chords for major and minor keys occur in the same chapter. Modulation emphasizes certain key relationships.	Applied chords for major mode occur separate from applied chords for minor mode. Modulation emphasizes certain key relationships.	Does not explicitly teach applied chords. Modulations and applied chords occur in the same chapter
Time Periods	Common-Practice Period when accompanied by emphasis on function	Folk-Song	Great amounts of Romantic and 20 th - 21 st century music All styles

Table 5.1 will be used as a basis for evaluating the textbooks in the following chapter.

CHAPTER VI

ANALYSIS OF TEXTBOOKS

The books selected for study fit into one of two categories: (1) sight-singing textbooks (as distinguished from complete musicianship) published between 1980 and 2018 appropriate for a two-year curriculum and (2) sight-singing books that are popular with instructors using particular solmization systems. All of the books chosen contain materials used in American colleges and universities. A search was made of sight-singing materials published in Music Index, Rilm, IIMP, and Google Scholar in order to locate textbooks for study. In addition, sight-singing textbooks published by major publishing companies including WW Norton & Company, Pearson-Prentice Hall, McGraw Hill, and Oxford University Press were identified. Sight-singing sources published by authors or by small publishing companies were not included because it is impossible to collect all sources of this kind.

Sight-singing books rather than complete musicianship books were chosen for study because the trend today is to publish sight-singing textbooks. From 2010-2018, there were seven sight-singing books published and two complete musicianship ones. From the survey of books, twenty-two fit into the two categories described above. Nineteen of these are sight-singing books published between 1980 and 2018¹¹ and three are textbooks popular with instructors using particular solmization systems.¹²

The next several paragraphs will give general information about the textbooks studied in this research providing the name of the author(s), name of the textbook(s),

¹¹ These nineteen include Adler (1997), Benjamin, Horvit, and Nelson (2013), Benward (1989), Benward, Carr, Greer, McKee, and Torbert (2015), Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017), Bland (1984), Cooper (1981), Damschroder (1995), DeLone (1981), Henry (1997), Horacek and Lefkoff (1989), Karpinski and Kram (2017), Krueger (2017), Levin and Martin (1988a), Lloyd, Lloyd, and DeGaetani (1980), Murphy, Phillips, West Marvin, and Clendinning (2016), Ottman and Rogers (2014), Stevenson and Porterfield (1986), and Thomson (1981; 1975).

¹² These three include Cole and Lewis (1909), Danhauser, Lemoine, and Lavignac (1910-1913), and Houlahan and Tacka (1991a/b).

overall layout of each textbook, other textbooks that are coordinated with each, and extra resources that accompany the sight-singing textbooks. The first fifteen are sight-singing-only textbooks (not comprehensive ones) appropriate for a two-year curriculum, the next four are sight-singing and dictation textbooks, and the last three are sight-singing books popular with instructors using particular solmization systems.

Sight-Singing-Only Textbooks

Adler

Sight singing: Pitch, interval and rhythm by Adler (1997) is for use in four semesters of study in aural-skills classes at colleges and universities. It uses an intervallic approach beginning with smaller diatonic and chromatic intervals of seconds and primarily progressing to larger intervals. Major, minor, and modal keys along with modulation, whole-tone melodies, and chromatic ones occur as early as Chapter II. The repertoire contains newly composed melodies and melodies from the literature ranging from Gregorian chant through the twentieth century. There are ten chapters of melodic studies (Chapters I-X), five chapters of rhythmic studies (Chapters XI-XV), and two chapters of additional melodies (Chapter XVI-XVII). Each melodic study chapter divides into three sections—preparatory and nonrhythmic exercises, melodies from the literature, and newly composed melodies. The preparatory exercises focus on singing specific intervals out of context and the nonrhythmic exercises focus on the same intervals in context. This word “context” does not necessarily mean a tonal context because Chapter II contains whole-tone melodies and ones that use the chromatic scale. Adler provides a couple of suggestions for progressing through his textbook: (1) he suggests studying pitch and rhythm chapters concurrently, e.g. he suggests pairing Chapters I and XI, etc., and (2) he suggests that the order of materials can change. For example, Adler writes,

In classes where this book is used over the course of several semesters, an instructor could, for instance, cover Chapter I and the preliminary and non-rhythmic exercises of Chapters II through VII in the first semester, the melodies from the literature in these chapters in the second semester, the newly composed, rhythmicized melodies in the third, and the more difficult intervals, alternate scales, and chords (Chapter VIII, IX, and X) in the fourth semester (p. xi).

Following the second suggested plan delays real literature until semester two. So, instructors may prefer to progress from the beginning of each pitch chapter until the end of each. However, if instructors do not follow the second suggested plan, extra difficulties will arise because of material occurring before it is taught. For instance, intervals of thirds, fourths, fifths, and sixths occur in Chapter II after having only learned the major and minor scales and singing intervals of seconds. This textbook does not include online programs, CDs, DVDs, or keyboard exercises. However, Chapter XVI contains melodies with keyboard and string accompaniments. These accompaniments are too advanced for average non-pianists.

Benjamin, Horvit, and Nelson

Music for Sight Singing by Benjamin, Horvit, and Nelson (2013) is for use in aural-skills classes that span two or three years at colleges and universities. It is coordinated with Horvit, Koozin, and Nelson's *Music for Ear Training*, fourth edition (Schirmer Books, 2013). The order of *Music for Sight Singing* parallels the order of the theory textbook by the same authors, *Techniques and Materials of Tonal Music* (Schirmer Books, 2013). The sight-singing textbook contains twenty-six units divided into three parts. Part I consists of common-practice diatonic music, Part II consists of common-practice chromatic music, and Part III consists of twentieth-century techniques. Parts I and II follow the typical common practice two-year theory curriculum and Part III can be integrated or its own course. The book contains mostly exercises composed by the authors and some literature. Vocal music is the only standard repertoire used and fewer than fifteen percent of the melodies are from the literature. There are five types of

exercises in the book: unpitched rhythmic exercises, pitched preliminary exercises, melodies composed by the authors, sing-and-play exercises, and vocal music from the literature. The pitched preliminary exercises isolate melodic and harmonic issues in a rhythmic context. There is an online program for the authors' ear-training textbook, but not for their sight-singing textbook.

Benward, Carr, Greer, McKee, and Torbert

Sight Singing Complete by Benward, Carr, Greer, McKee, and Torbert (2015) is for college- and university-level aural-skills classes. While the book does not indicate a time period for completion of the textbook, it is probably for a four-semester aural-skills curriculum. The textbook contains a total of sixteen units. Units 1 to 8 consist of diatonic tonal music, Units 9 to 14 consist of chromatic tonal music, and Units 15-16 consist of twentieth-century materials. Within each unit, except for the last, there are five parts: ABCDE. A is "Rhythm," B is "Models and Melodic Fragments for Interval Singing," C is "Shorter and Easier Melodies to be Sung at Performance Tempo," D is "Melodies for More Comprehensive Study," and E is "Ensembles and Sing and Play." While Section B suggests an intervallic approach, the other sections are diatonic in Units 1 to 4. Instructors not favoring an intervallic approach can choose to eliminate these exercises. However, these intervals enter into other sections, e.g. on p. 85 in Unit 5, Section D, number three, there is an excerpt in G major that contains a minor sixth leap from $\hat{2}$ up to lowered $\hat{7}$. This occurs just after learning isolated major and minor sixths. This textbook begins with a functional approach in Units 1 to 3 considering the fact that the beginning melodies are stepwise and outline the tonic and dominant triads. Then in Unit 4, the authors depart this approach for an intervallic approach. There are no CDs, DVDs, or online programs that accompany the text.

Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone

A New Approach to Sight Singing (2017) is for four-semester aural-skills classes at colleges and universities. The book's organization consists of four chapters divided into four sections, except for Chapter 1, where there are five sections. Chapter 1 consists of unaccompanied melodies, Chapter 2 contains rhythmic exercises, Chapter 3 covers duets, and Chapter 4 presents sing-and-play exercises. Each section number corresponds to one semester of study. Section I melodies are elementary level; Section II and III melodies are intermediate, and Section IV is advanced. The authors recommend studying Section V of Chapter 1, which covers post-tonal music, during Sections III and IV or just with Section IV. Sections I and II consist of diatonic tonal music, a few chromatic notes, and simple modulations, while Sections III and IV present chromatic tonal music and additional modulations, and Section V covers post-tonal music. A majority of the exercises are composed by the authors (approximately 90 percent), whereas fewer than 10 percent are from the literature. InQuizitive for Aural Skills, a program designed to aid development of aural skills, can be packaged with this textbook.

Bland

Sight Singing through Music Analysis by Bland (1984) is for two years of aural-skills study at colleges and universities. It uses a unique structural approach making a distinction between structural and embellishing tones. Bland provides reductions on staves below the melodies. He does not use any music from the literature; all of the exercises are composed by the author. The book contains fourteen chapters: Chapters 1 to 5 introduce diatonic tonal music, Chapters 6 to 11 present chromatic tonal music and modulation, and Chapters 12 to 14 cover modal music and twentieth-century idioms. There are no keyboard exercises and no supporting software such as CDs, DVDs, or websites.

Cooper

Dimensions of Sight Singing: An Anthology by Cooper (1981) is for college and university-level aural-skills classes. While the book does not indicate a time period for completion of the textbook, it is probably for a four-semester aural-skills curriculum. Cooper presents melodies in chronological order beginning with fourth century vocal music and progressing to the twentieth century in Part I (Chapters 1 to 11) and folk songs in Part II (Chapters 12 to 15). All of his melodies come from the vocal repertoire. Cooper claims “a serious attempt has been made to order the material pedagogically from easy to difficult” (p. xix). However, that is not always practicable. (For example, Classical music has less rhythmic and pitch problems than late Baroque music. Cooper places an emphasis on C-clefs when presenting Classical music in order to compensate for the lesser demands.) This book is unusual in the fact that it includes Latin, French, German, and Italian pronunciation guides in an appendix. Cooper suggests the occasional use of keyboard, guitar, or pitched percussion instruments for chordal accompaniments in Units 12 to 15. Other than that, there are no keyboard exercises. There are no websites, CDs, or DVDs to accompany the text.

DeLone

Literature and Materials for Sightsinging by DeLone is for two-year sight-singing classes at colleges and universities. Similar to Cooper (1981), DeLone (1981) also presents melodies in chronological order. He begins with folk, Medieval, and Renaissance music followed by twentieth-century melodies. His textbook divides into four units, with each unit corresponding to a different semester of study. Within each unit are two or three subdivisions. Unit 1 begins with eighty folk melodies that are either in major, minor, or modal keys, Unit 2 contains seventeenth- through nineteenth-century melodies that use mode mixture, imply secondary dominant chords, or contain modulations, Unit 3 consists of recitatives, accompanied songs, and opera excerpts from

the seventeenth through the nineteenth century, and Unit 4 consists of twentieth-century concert music, popular music and jazz making use of synthetic scales. In supplementary exercises in the back of the book on pp. 404-405, DeLone suggests playing piano and singing for two exercises. Other than that, there are no other keyboard exercises. There are no websites, CDs, or DVDs to accompany the text.

Henry

Sight Singing by Henry (1997) is for a two-year aural-skills curriculum at colleges and universities. His book divides into nine units, which further divide into twenty chapters. He recommends Units 1 to 5 for first-year studies and Units 6 to 9 for second-year studies. Units 1 to 5 cover all diatonic chords and introduce secondary dominants in the final chapter. Units 6 to 9 cover modulation, modes, synthetic scales, and intervallic singing in atonal music. Each chapter further divides into five different areas: warm-ups, exercises for analysis or composition, studies, excerpts from the literature, and ensembles. The excerpts from the literature and some of the ensemble pieces are from the literature, but the remaining exercises are composed by the author. More than half of the melodies are composed by the author. There are no keyboard exercises, websites, CDs, or DVDs to accompany the text.

Karpinski and Kram

Anthology for Sight Singing by Karpinski and Kram (2017) is a collection of art music with some folk songs designed for use in a two-year curriculum in aural skills. Karpinski's (2017) *Manual for Ear Training and Sight Singing* is coordinated with this *Anthology*. At many points in this dissertation, the *Manual* is referenced because it provides step-by-step instructions on sight singing more strongly suggesting pedagogical approaches, whereas the *Anthology* is simply a collection of musical excerpts with no extra explanations. The *Anthology* contains 1790 melodies, with the majority of them

being tonal, a small portion modal, others stretch the limits of tonality, and some explore non-diatonic pitch collections. The melodies are a mix of instrumental and vocal works from a variety of genres and stylistic periods. The *Manual* contains 79 chapters with Karpinski designating some as essential (55 chapters) and others as optional (24 chapters). He suggests three plans for two curriculum models (three for four-semester sequences and another three for six-quarter sequences): (1) beginning after fundamentals through twentieth-century idioms, (2) beginning with fundamentals through chromatic harmony, and (3) beginning with fundamentals through twentieth-century idioms. Option 1 presents diatonic materials in semesters one and two and chromatic harmony and modulation in semesters three and four. Option 2 presents diatonic materials in semesters one, two, and three and chromatic harmony in semester four. The downside of option 2 is that modulation does not occur. Option 3 covers twenty-eight chapters in one semester, which is demanding. Keyboard exercises occur in the *Manual*, but not in the *Anthology*. A website accompanies the *Anthology* that allows instructors to search the excerpts for different levels of difficulty or topics of study. A website that accompanies the *Manual* allows students access to extra melodies for dictation practice.

Krueger

Progressive Sight Singing by Krueger (2017) is for use in a four-semester sequence of aural-skills classes at colleges and universities. The book divides into two sections, which are to be studied concurrently—Part I contains twenty-six chapters on rhythmic exercises and Part II contains twenty-four chapters on melodic exercises. The layout of each chapter reveals a sound-before-symbol approach. The chapters follow this sequence: building aural/oral skills, symbolic association, patterns, and exercises. The building skills section introduces sounds by rote, the symbolic association introduces the notation for the skill learned by rote in the previous section, the patterns section presents tonal and rhythmic patterns aimed at functional listening, and the exercises consist of

melodies composed by the author, folk music, and examples from the literature. The patterns introduced in the book are available on Krueger's companion website (www.oup.com/us/krueger) along with other pitch, melodic, and rhythmic exercises. There are no keyboard exercises. In addition to teaching sight singing, a small section of the book (Appendixes C and D) introduces dictation strategies and harmonic dictation exercises. This is not a dictation book—there are very few melodic-dictation exercises provided in this textbook unless instructors choose to use sight-singing melodies from it.

Lloyd, Lloyd, and DeGaetani

The Complete Sightsinger by Lloyd, Lloyd, and DeGaetani (1980) is for students who have a good foundation in fundamentals of sight-singing and is appropriate through the second year of aural-skills study at colleges and universities. Similar to Cooper (1981) and DeLone (1981), Lloyd, Lloyd, and DeGaetani (1980) present melodic excerpts in chronological order. Their textbook divides into seven chapters progressing from earlier time periods to later ones. Chapter 1 begins with Medieval plainsong using a four-line staff, Chapter 2 introduces Medieval modes using a five-line staff, and by the end, Chapter 7 introduces twentieth-century music. Each chapter begins with exercises based on literature excerpts followed by literature excerpts. The organization of the material is not from easy to hard. Therefore, instructors can present the material in any order. Most of the literature excerpts in this textbook are vocal with a minority being instrumental. There are no keyboard exercises, CDs, DVDs, or websites to enhance their textbook.

Murphy, Phillips, Marvin, and Clendinning

The Musician's Guide to Aural Skills: Sight-Singing by Murphy, Phillips, Marvin, and Clendinning (2016b) is for two years of aural-skills instruction at colleges and universities. The sight-singing volume corresponds with both a dictation volume called

The Musician's Guide to Aural Skills: Ear-Training (2016a) and a theory volume called *The Musician's Guide to Theory and Analysis* (WW Norton & Company, 2016) by the same authors. The sight-singing volume covers singing strategies, pitch-reading, rhythm-reading, improvisation, and keyboard harmony. The sight-singing volume has four sections that divide into forty chapters, which align with both the ear-training volume and the theory textbook. Part I introduces elements of music (Chapters 1-10), Part II presents diatonic harmony and tonicization (Chapters 11-21), Part III covers chromatic harmony and form (Chapters 22-32), and Part IV presents twentieth century and beyond (Chapters 33-40). Each of the forty chapters also has a keyboard lesson corresponding to that chapter. Each chapter begins with a summary of learning objectives for the chapter. New pitch and rhythm concepts occur first in isolation before they occur in the melodies. There are no CDs, DVDs, or websites to accompany the sight-singing text. However, there is a website to accompany their ear-training text for dictation practice.

Rogers and Ottman

Music for Sight Singing, ninth edition, by Rogers and Ottman (2014) is for college- and university-level aural-skills classes. While the book does not indicate a time period for completion of the textbook, it is often used for a four-semester aural-skills curriculum. The book consists of four sections which divide into twenty-one chapters: Parts I and II introduce diatonic music (corresponding to the first year of aural-skills classes) and Parts III and IV present chromaticism, tonicization, modulation, and modal and post-tonal music (corresponding to the second year of aural-skills classes). The textbook contains rhythm-only exercises, pitch exercises, duets, and three improvisation melodies per each chapter. Almost half of the melodies are folk songs, most others are common-practice literature excerpts, and about six percent are composed by the authors. The book progresses from simple to complex with new concepts receiving written explanations. Rogers and Ottman (2014) write, "Each chapter methodically introduces

elements one at a time, steadily increasing in difficulty while providing a musically meaningful framework around which students can hone their skills” (p. x). When new rhythmic concepts occur, the pitch material is simpler than it was and gradually becomes more difficult. Likewise, when new pitch concepts occur, the rhythmic material is simpler than it was and gradually becomes more difficult. This layout offers great flexibility for instructors. So, instructors can cover the book out of sequence without teaching rhythmic or pitch concepts not covered previously. There are no keyboard exercises and no CDs that accompany the book. However, the authors recommend a program called MySearchLab that instructors can use with this sight-singing textbook. MySearchLab is an online program through which instructors can assign and post assignments, students can submit sight-singing performances and receive feedback, and students can practice rhythmic drills with the program.

Stevenson and Porterfield

Rhythm and Pitch: An Integrated Approach to Sightsinging by Stevenson and Porterfield (1986) is for college- and university-level aural-skills classes. While the book does not indicate a time period for completion of the textbook, it is probably for a four-semester aural-skills curriculum. The textbook contains sixteen units beginning with diatonic music in Units 1-9 followed by chromatic, tonicization, and modulation in Units 9-15 and then modal music in Unit 16. There is minimal twentieth-century music. The authors present intervals from small to large. The sequence follows an order that is compatible with theory curriculums. Within each chapter, the authors present explanations of new rhythm and pitch concepts, exercises that practice those rhythmic and pitch concepts in isolation, clef-reading exercises, and melodies that integrate both of the pitch and rhythmic concepts learned in the chapter. Their book is unique in the fact that it includes clef-reading exercises that are not to be sung, but to be spoken on letter

names. There are no keyboard exercises, CDS, DVDs, or websites that accompany the textbook.

Thomson

Introduction to Music Reading: Concepts and Application (1981) and *Advanced Music Reading* (1975) by Thomson are for beginning- and advanced-level aural-skills classes respectively at colleges and universities. While the books do not indicate a time period for completion of them, it is probable that each book corresponds to one year of instruction. The *Introduction* volume contains fourteen chapters: Chapters 1-9 introduce diatonic music; Chapters 10, 11, 13, and 14 present chromatics, tonicization, and modulation, and Chapter 12 covers modes. The advanced volume contains eight chapters and revisits concepts taught in the first volume such as modulation. The first three chapters are review and the book progresses to more advanced pitch and rhythmic concepts covering modulation to remote keys in Chapter IV, and twentieth century idioms in Chapters V-VIII. Each chapter's layout is slightly different depending on the concepts taught. For example, if new rhythmic concepts occur, rhythmic exercises occur in isolation. If new melodic concepts occur, then tonal pattern exercises occur. Each new concept receives a written explanation followed by exercises, practice melodies, and melodies from the literature. After Chapter 5 of Volume 1, all chapters contain music of multiple parts. His book is unique in that it discusses tonality frames versus pitch range and he indicates the tonality frame before each excerpt in Chapters 2 and 3. Similar to Bland (1984), Thomson (1981) makes a distinction between structurally important notes and embellishing ones. Thomson refers to the gamut of the keyboard in Chapter 2 and instructs students to play a note first on piano before singing the pitch in Chapter 3, but he does not include keyboard exercises in his textbook. He encourages students to use the piano sparingly for checking pitch in order to avoid it becoming a crutch. There are no CDs, DVDs, or websites to accompany the text.

Sight-Singing and Dictation Textbooks

Benward

Basic Sightsinging and Ear Training (1989b) and *Advanced Sightsinging and Ear Training* (1989a) are for two years of aural-skills classes at colleges and universities. The beginning-level book contains twelve chapters and the advanced-level book consists of eight chapters. Both sight-singing and dictation exercises occur in the books. In the sight-singing portion, there are rhythmic exercises, single- and multi-part melodies, and intervallic exercises to practice. In the dictation portion, there are rhythmic, intervallic, melodic, and harmonic exercises. Chapters 1 through 8 of the *Basic* text present primarily diatonic melodies with chromatic pitches creeping into the melodies. These chapters introduce all intervals from small to large (with minor exceptions, e.g. the tritone occurs after major and minor sixths and diminished and augmented intervals occur after major and minor sevenths) and all diatonic chords in major and minor keys. Chapters 8 through 12 cover modulation in tandem with secondary dominant chords. The *Advanced* text begins with eighteenth-century counterpoint in Chapter 2 and progresses to twentieth-century serial and free-tonal music in Chapter 8. The chapters in between present borrowed chords, extended tertian chords, Neapolitan sixth chords, and augmented sixth chords. A computer program accompanies the dictation portion of this book. There are no keyboard exercises.

Damschroder

Damschroder designed *Listen and Sing* (1995) to coordinate with the tonal portion of undergraduate study beginning with major melodies outlining the tonic chord and progressing as far as modulation, secondary chords, Neapolitan sixth chords, and augmented sixth chords, but not twentieth-century material. If instructors desire to introduce twentieth-century idioms, they need to supplement with other materials. *Listen and Sing* consists of twenty-six chapters of sight-singing and dictation exercises.

Chapters 1 through 14 present diatonic exercises and Chapters 15 through 26 cover modulation, secondary chords, and other chromatic chords. Each chapter begins with a brief summary of theoretical concepts, but not enough to be sufficient for a theory text. The chapters contain the following types of singing exercises—melodies, duets, accompanied solos (sing-and-play exercises), rhythms, intervals, arpeggios, and quick switch exercises to practice. The quick switch exercises consist of short melodic patterns arranged in boxes where the instructor calls out the box to sing. The book contains error detection plus rhythmic, melodic, and harmonic dictation. A cassette tape accompanies the book and contains all of the dictation exercises.

Horacek and Lefkoff

Horacek and Lefkoff intended *Programmed Ear Training Volumes I and II* (1989) for one of three purposes: (1) for two-year sequences of aural skills at colleges and universities, (2) for self-instruction, or (3) as a supplement for in-class instruction. The textbooks contain exercises in sight singing and dictation. The sight-singing exercises consist of harmonic singing of arpeggios, intervallic practice, and singing melodies composed by the authors (there are no literature excerpts). The two volumes divide into four parts—Part A introduces intervals, Part B presents melody and rhythm, Part C covers harmony, and Part D covers advanced harmony. The authors claim that the order of sections can change, except for parts C and D where D must follow C. Part A introduces intervals from small to large. Part B presents elementary melodies in B2, intermediate singing in B5, leaps to non-diatonic pitches (implying secondary dominant chords) in B10, modulation in B12, and advanced singing in B13. The pitch material of the elementary, intermediate, and advanced melodies is similar: The melodies are mostly diatonic, stepwise, and outline various intervals. The main differences are in rhythmic complexity and key signatures. The elementary melodies contain up to one sharp or flat in the key signature, the intermediate ones contain up to three sharps or flats, and the

advanced melodies contain up to six sharps or flats. It is a programmed textbook; all singing and dictation exercises are on tapes that accompany the books. The format of the singing portion of the books is as follows: The book presents a short excerpt, interval, or arpeggio for students to sing. The students should play the cassette, which gives the starting pitch and metronome taps for tempo, and the students sing with the metronome. After the students sing, the tape plays the melody envisioning that students will recognize if they sang it correctly or not. With this format, the authors think that students benefit because they can proceed at their own pace.

Levin and Martin

Sight Singing and Ear Training through Literature (1988a) is for a two-year sequence of aural-skills classes at colleges and universities. There is a teacher's manual that coordinates with the student textbook called *Teacher's Manual: Singing and Ear Training through the Literature* (1988b) by the same authors, which provides instructions on teaching methods and dictation melodies for classroom use. This dissertation references the teacher's manual in addition to the student text. The textbook divides into four groups of ten lessons with a review lesson after every five; each group corresponds to one semester. Levin and Martin include both sight-singing and dictation excerpts from the Medieval period through the twentieth century. Lessons 1 to 20 present diatonic melodies with each lesson progressing to having more sharps or flats in the key signature and Lessons 21 to 40 cover chromatic melodies. The authors introduce keys in a systematic order in different lessons, but introduce modes in the same lesson as similar scales, e.g. F major and F Lydian occur in the same lesson as do G major and G Mixolydian, D minor and D Dorian, and E minor and E Phrygian. In the singing portion of each lesson, the authors provide tonal patterns to practice with each scale including the scale itself, tetrachord patterns, tonic triad arpeggios, and intervals from the tonic to other notes in the scale. In addition to those tonal patterns, each chapter contains the following

types of pitch exercises: rhythmic exercises, sequential improvisations, isolated intervals, pitch group patterns, pitch memory exercises, harmonic progressions, and melodies. One of those needs explanation. Pitch memory exercises train students to memorize where A 440 is and from that A, they learn to locate all other pitches. There are also rhythmic, melodic, and harmonic dictation exercises in the book, but there are no recordings to accompany the textbook. A unique feature of this book is that the authors include instructions on clef transposition and how to use the circle-of-fifths method to identify chromatic pitches when transposing.

Sight-Singing Books That Are Popular with Instructors Using Certain Solmization Systems

The next three sight-singing books are popular with instructors using particular solmization systems. Cole and Lewis (1909) and Danhauser, Lemoine, and Lavignac (1910-1913) are popular with instructors favoring fixed systems. Houlahan and Tacka (1991a/b) are popular with instructors favoring relative movable *do*.

Cole and Lewis

The authors of *Melodia* state that the textbook provides “more and better graded material for use in conservatories and by private teachers” (v). While the textbook does not indicate a time period for completion of it, it is for aural-skills sequences at conservatories. The textbook divides into four books, which further divide into a total of eleven series. Each book corresponds to one semester in a four-semester curriculum. The first eighty pages of the book (which includes all of Book I and two-thirds of Book II) present materials in stepwise motion in order to focus on difficult rhythms. This is a departure from the norm since most sight-singing textbooks progress beyond step-wise motion before the end of the first semester. Book I presents 108 melodies in C Major before gradually introducing the other key signatures using up to five flats and five sharps

by the end of Book I. Book II presents chromatic tones, compound meter, sixteenth notes, triplets, and key signatures with up to six flats and six sharps. At the end of Book II in Series 5, intervals progress from large to small with the exception of major and minor seconds, which occur earlier in the book. This is a departure from the conventional order of intervals, which is normally small to large. The same intervals treated at the end of Book II occur in Book III plus modulation. Book IV presents chromatics that deny the key signature, more advanced pitch and rhythm concepts, and modal melodies. There are no keyboard exercises or extra supplemental software programs to accompany this book.

Danhauser, Lemoine, and Lavignac

Solfège des solfèges by Danhauser, Lemoine, and Lavignac (1910-1913) is a 34-volume set on sight-singing popular among advocates of fixed systems. While the books do not indicate a time period for completion of them, they are probably for a full aural-skills curriculum that covers more than two years of instruction. The thirty-four volumes fit into 10 levels, which subdivide using the letters A, B, C, etc. The volumes include 1A-1E, 2A-2C, 3A-3H, 4A-4F, 5A-5C, 6A-6B, 7A-7B, 8A-8B, 9A-9B, and 10. Some of these books are identical or very similar to other volumes with the only difference being clefs used, e.g. 1A and 1C are very similar—the treble clef excerpts from 1A are in bass clef in 1C. Similarly, 1D and 1E contain the same exercises in different clefs as do 3F, 3G, and 3H. Of the 34 volumes, there are 30 books with unique melodies. Level 1 books use treble and bass clefs with up to four sharps or flats in the key signature, Level 2 books use treble and bass clefs with up to seven sharps or flats, Level 3 books use soprano, alto, and tenor clefs, Level four books use mezzo-soprano and baritone clefs, Level 5 uses all the clefs, Levels 6 to 9 contain multi-part excerpts, and Level 10 excerpts all have French text. The books' organizations are around clefs and key signatures rather than by harmonic topics. There are no keyboard exercises, CDs, DVDs, or websites

accompanying the textbooks. This dissertation references Danhauser, Lemoine, and Lavignac (1923) a couple of times. Volume 1A of that set is an English translation of Volume 1A from the 1910 edition and contains identical exercises and exercise numbers in a different order. The supplementary melodies that occur at the end of the 1910 edition are interspersed among the other melodies in the 1923 edition.

Houlahan and Tacka

Sound Thinking by Houlahan and Tacka (1991a/b) is a two-volume set appropriate for two semesters of sight-singing study. The authors recommend their textbooks for ear-training classes at colleges, music classes at high schools, advanced music classes at middle schools, and as self-instruction books by adults. Volume 1 contains seventeen sections and Volume 2 contains nineteen sections. Each section heading identifies the pitches or rhythms studied in that section. The authors provide relative movable-*do* syllables when new pitches occur. Volume 1 begins with melodies that outline the minor third between movable-*do* syllables, *sol* and *mi* and progresses to pentatonic and extended pentatonic melodies. Volume 2 starts with extended pentatonic melodies, progresses through major scales, modes, minor scales, I, IV, and V harmony, and modulation. Houlahan and Tacka indicate that the sequence of materials is based on Kodály's method. They borrow Kodály's use of relative movable *do*, hand signs, rhythmic syllables, stick notation (musical shorthand, a non-staff notation), and rote-to-note approach. New rhythm and new pitch materials occur in stick notation (non-staff notation) before they occur in real notation. New rhythms occur alone before they occur with pitch material. The authors indicate that their tonal patterns are characteristic of folk music and that all exercises are drawn from folk and art music. They include instructions for dictation, but do not include dictation melodies in their textbooks. There are no keyboard exercises, CDs, DVDs, or websites accompanying these books.

Table 6.1 shows a summary of the basic features of the sight-singing textbooks chosen for study. It indicates the name(s) of author(s), publication date, years of study, and other basic features of the textbooks.

Table 6.1: List of textbooks and general features within each

Author	Date	Years of Study	Rhythm	Online Program	CDs or DVDs
Adler	1997	2	Yes	No	No
Benjamin, Horvit, and Nelson	2013	2-3	Yes	Not with sight-singing textbook	No
Benward	1989	2	Yes	NO	Computer program for dictation.
Benward, Carr, Greer, McKee, Torbert	2015	2	Yes	No	No
Berkowitz, Fontrier, Kraft, Goldstein, Smaldone	2017	2	Yes	InQuizitive for aural skills is an optional package	No
Bland	1984	2	Yes	No	No
Cole and Lewis	1909	2	Yes	No	No
Cooper	1981	2	Yes	No	No
Damschroder	1995	2	Yes	No	Tape for dictation
Danhauser, Lemoine, Lavignac	1910-1913	More than 2	No isolated rhythms	No	No
DeLone	1981	2	Yes	No	No
Henry	1997	2	Yes	No	No
Horacek and Lefkoff	1989	2	Yes	No	Tape
Houlahan and Tacka	1991	1	Yes	No	No
Karpinski and Kram	2017	2	Yes	Yes, to aid instructor in excerpt selection	Not with sight-singing text
Krueger	2017	2	Yes	Yes	No
Levin and Martin	1988	2	Yes	No	No
Lloyd, Lloyd, DeGaetani	1980	2	Yes	No	No
Murphy, Phillips, Marvin, and Clendinning	2016	2	Yes	No	Not with sight-singing text
Ottman and Rogers	2014	2	Yes	No	No
Stevenson and Porterfield	1986	2	Yes	No	No
Thomson	1981; 1975	2	Yes	No	No

Musical Elements

We will next proceed through the elements and other features, applying them to each text. The elements of music and other topics observed are: (1) syllables used in the body of the textbook, (2) scales used, (3) key signatures used, (4) organization—harmonic context, chromatic/diatonic intervallic context, or pitch-name reading emphasis, (5) characteristics of melodies and tonal patterns used at the beginning of the textbook, (6) treatment of minor and modes when introduced, (7) methods for teaching applied chords, tonicization, and modulation, and (8) styles and genres of exercises found in the textbooks. Additionally, this dissertation will examine the answers to five questions in each textbook.

The first question examined for each book is: what are its goals? The goals reveal what the writers hope to accomplish in the students progressing through the book. Some books explicitly reveal mastery of a solmization method, or the writers reveal methods to accomplish that goal thereby revealing their biases. Second: what instructions does the text provide with regard to a solmization system? If the instructions align with the goals of one of the systems, they will show a preference for one system. The third question is: what instruction does the text give when teaching major mode? The fourth question is: what instruction does the text give when teaching minor mode? The instructions will reveal how the writers think that students ought to sing melodies in each of these modes. If the pedagogical advice aligns with one particular method, then that reveals a bias for that method. The final question is: what instruction does the text give when teaching twentieth-century idioms?

Notated Solmization Syllables

Solmization syllables written in the textbook indicate a preference. Many textbooks do not write syllables below the melodies (possibly because they do not want to limit the market for their book). However, some indicate syllables. It is important to

note that syllables listed in a preface or in an appendix do not receive consideration here. The syllables criteria for inclusion are only if they are in the body of the text. The reason is that some books list all of the methods most commonly used and a list does not indicate a bias. Some authors use a select few solmization syllables in the body of the textbook, which suggests a preference for those used in the body. For example, Krueger (2017) lists both fixed and movable systems in an appendix but uses scale-degree numbers and movable-*do* syllables (both *la-* and *do-*based minor) in the body of the textbook. Textbooks favoring fixed systems that notate syllables in the text will provide fixed syllables and scale-degree numbers, but will not provide movable-*do* syllables. Textbooks favoring movable systems that notate syllables in the text will provide movable-*do* syllables, scale-degree numbers, and letter names, but will not provide fixed-*do* syllables.

The following books use a combination of movable-*do* syllables (parallel and relative minor movable-*do* syllables) and scale-degree numbers, which suggests a movable system bias (but does not indicate a parallel or relative preference): Benward, Carr, Greer, McKee, and Torbert (2015), Benward (1989b), and Krueger (2017). Benward, Carr, Greer, McKee, and Torbert and Benward identify movable syllables when singing major mode melodies. Solmization syllables are the same for parallel and relative movable *do* when solmizing melodies in a major mode. Therefore, it does indicate a preference for parallel or relative methods, but instead a general movable preference. Krueger introduces both relative and parallel movable syllables when presenting minor, which reveals a general preference for movable systems.

The following books use movable-*do* syllables, scale-degree numbers, and letter names, which reveals movable and fixed pedagogical methods: Murphy, Phillips, Marvin, and Clendinning (2016b) and Thomson (1981). Murphy, Phillips, Marvin, and Clendinning list the syllables for movable *do*, fixed *do*, and scale-degree numbers when introducing a major scale. When they present minor mode, they identify parallel

movable-*do* syllables, scale-degree numbers, and letter names, but they use both parallel and relative syllables in addition to scale-degree numbers and letter names when introducing modal collections. They use a combination of movable and fixed pedagogical methods. Thomson provides scale-degree numbers and movable-*do* solmization syllables when covering practice patterns in Chapter 4 and he uses letter names when introducing new clefs in Chapters 2 and 8. These methods contain both movable and fixed approaches.

The following books use one or a combination of *do*-based minor movable-*do* syllables, scale-degree numbers, and letter names, which suggests a parallel movable-system bias but uses movable and fixed approaches: Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) and Rogers and Ottman (2014). Berkowitz, Fontrier, Kraft, Goldstein, and Smoldone (2017) and Rogers and Ottman (2014) identify *do*-based minor syllables when introducing minor and letter names when presenting C-clefs. Their books use both movable and fixed pedagogical methods. Similarly, Cooper (1981) uses a combination of movable and fixed methods. Cooper lists *do*-based minor movable-*do* and fixed-*do* syllables when introducing major mode (one exercise is in the minor mode even though the chapter focuses on the major mode) and he uses scale-degree numbers when presenting minor mode. Both fixed and movable approaches occur in his book.

One textbook includes a combination of *do*-based minor syllables, *la*-based minor syllables, scale-degree numbers, and letter names, which uses syllables associated with movable *do* (both relative and parallel) and fixed *do*. Karpinski (2017) mentions both movable *do* and numbers in all discussions of scale degrees and letter names when introducing clefs and transposition. He primarily uses parallel movable syllables in minor, but he also uses *la*-based minor syllables for two chapters as well. *Do*-based minor syllables occur predominantly and he indicates in the introduction of his manual that his book is not a relative minor book. Since relative/parallel movable syllables,

scale-degree numbers, and letter names occur in the body of the text, this one fits the categories of movable *do* and fixed *do* approaches.

The following two textbooks use only one set of syllables in the body of the text, which indicates a bias for that particular system. Houlahan and Tacka (1991a/b) use *la*-based minor movable-*do* syllables in the body of the textbook, which indicates a *la*-based minor preference. Danhauser, Lemoine, and Lavignac (1910-1913) use fixed-*do* syllables in their textbook, which indicates a fixed system bias.

Books that do not list syllables reveal no bias. The following books fit that category: Benjamin, Horvit, and Nelson (2013), Cole and Lewis (1909), Bland (1984), Horacek and Lefkoff (1989), and DeLone (1981).

There is a common characteristic that textbooks favoring either movable or fixed methods share. They both identify scale-degree numbers in the body of the textbook as a possibility. Scale-degree numbers is a movable approach. Books that list only scale-degree numbers and no other syllables demonstrate movable approaches in this category. Movable approaches in one category does not define the bias of a whole book since some books listing numbers favor fixed systems whereas others favor movable systems. The following fit into this category (of identifying scale-degree numbers but no other syllables): Adler (1997), Damschroder (1995), Stevenson and Porterfield (1986), Henry (1997), Levin and Martin (1988a), and Lloyd, Lloyd, and DeGaetani (1980). It is important to note that Lloyd, Lloyd, and DeGaetani use numbers for two purposes: (1) to refer to scale-degree numbers and (2) to refer to root, third, and fifth of the chord. The others use numbers to refer to scale-degree numbers. Using the same syllables for different functions creates confusion for the students. Karpinski (2000a) finds that using the same syllables for different meanings is “unworkable for students and instructors alike” (p. 91). He is referring to fixed-*do* and movable-*do* syllables, but it applies to numbers as well. Table 6.2 reveals the page numbers where the syllables occur in the various textbooks and Table 6.3 shows the approaches revealed by the syllables used.

Table 6.2: Solmization syllables provided in the body of the textbook

	Movable <i>do</i> - only in major key	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Scale- degree numbers	Fixed <i>do</i>	Letter names
Adler				p. 8		
Benjamin, Horvit, and Nelson						
Benward	p. 44			p. 44		
Benward, Carr, et al	p. 135			p. 11		
Berkowitz, et al		p. 11				p. 13 C-clef
Bland						
Cole and Lewis						
Cooper		p. 243		p. 262	p. 243	
Damschroder				p. 41		
Dannhäuser					p. 1	
DeLone						
Henry				p. 11		
Horacek and Lefkoff						
Houlahan and Tacka			p. 79			
Karpinski		<i>Manual</i> p. 84	<i>Manual</i> p. 82	<i>Manual</i> p. 8		<i>Manual</i> p. 128
Krueger		p. 235	p. 235	p. 235		
Levin and Martin				p. 34		
Lloyd, Lloyd, DeGaetani				p. 330		
Murphy, Phillips, et al		pp. 49, 65	p. 65- in modes chapter	p. 4		p. 4
Rogers and Ottman		p. 65		p. 65		p. 101 C-clef
Stevenson & Porterfield				p. 3		
Thomson	p. 48			p. 48		pp. 138- 139

Table 6.3: Solmization syllables provided in the body of the text reveal these biases

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler	X			
Benjamin, Horvit, and Nelson				
Benward	X			
Benward, Carr, et al	X			
Berkowitz, et al		X		X
Bland				
Cole and Lewis				
Cooper	X			X
Damschroder	X			
Danhauser, Lemoine, Lavignac				X
DeLone				
Henry	X			
Horacek and Lefkoff				
Houlahan and Tacka			X	
Karpinski and Kram	X			X
Krueger	X			
Levin and Martin	X			
Lloyd, Lloyd, DeGaetani	X			
Murphy, Phillips, et al	X			X
Rogers and Ottman		X		X
Stevenson & Porterfield	X			
Thomson	X			X

Scales

Most fixed-*do* and movable-*do* books introduce melodies in the major mode before introducing melodies in the minor mode. However, within the movable category, pentatonic scales, pentachord, and major scales frequently occur in a different order. Parallel movable-*do* books often introduce major mode, followed by minor mode, and if taught, modes and pentatonic scales occur later whereas relative movable-*do* books often introduce pentatonic or pentachord melodies first then major mode, minor mode, and modal collections occur later.

Books that introduce melodies in major mode first, minor mode later, and no pentatonic ones fit either a fixed-*do* or movable-*do* mold. These textbooks include Danhauser, Lemoine, and Lavignac (1910-1913), Cole and Lewis (1909), Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017), Damschroder (1995), Horacek and Lekoff (1989), Stevenson and Porterfield (1986), and Rogers and Ottman (2014). Some of these books are popular among certain methods; other features of those textbooks will more strongly suggest a bias for those methods.

Textbooks that introduce pentatonic or pentachord melodies first followed by major mode, minor mode, and modes fit a *la*-based minor movable-*do* mold in this category. These textbooks include Houlahan and Tacka (1991a/b), Krueger (2017), and Bland (1984). Houlahan and Tacka begin with pentatonic melodies starting with melodies that outline a leap between movable syllables *sol* and *mi*, adding *la*, and then *re* and *do*. Krueger starts with pentachord melodies introducing an additive pentachord scale (ascending and descending) on the first page covering pitch, which is on p. 201 of Chapter 1. Chapter 2 covers the major scale. Bland begins with major tonic triads in Chapter 2. In the same chapter, he fills in major triads with passing tones, adds the other notes of a major scale, and inverts the triad. Similar to relative system books, he begins with a pentachord scale. However, he introduces the other notes of the scale shortly afterwards. Therefore, Bland fits either a relative or parallel system approach.

Books that introduce melodies first in major mode, then in minor mode, followed by pentatonic melodies suggest either a *do*-based minor movable-*do* system or a fixed-*do* system. These textbooks include Benjamin, Horvit, and Nelson (2013), Benward (1989b), Benward, Carr, Greer, McKee, and Torbert (2015), Karpinski and Kram (2017), Henry (1997), and Levin and Martin (1988a).

Two textbooks introduce major mode, then pentatonic or pentachords, followed by minor mode and modal collections, which do not reveal a preference for one method over another. These textbooks include Murphy, Phillips, Marvin, and Clendinning (2016b) and Thomson (1981). Major mode occurs early, which suggests either fixed *do* or parallel movable *do*, but pentatonic or pentachord melodies occur early, which suggests relative movable *do*. This order works well for users of the various solmization systems and does not indicate a bias in this category.

Some of the books, particularly the ones that present melodies in chronological order, introduce modal collections early in their books and add major and minor modes later. These particular textbooks will not work well for beginners learning parallel movable *do* because of the syllable alterations required. They work well for users of fixed *do* and possibly relative movable *do* if no non-diatonic pitches occur early in the books. Lloyd, Lloyd, and DeGaetani (1980) introduce modal collections in Chapter 1 and major and minor modes in Chapter 4. Chromatic pitches occur early in the text in Chapter 2 on p. 13. The early introduction of chromatic pitches is difficult for relative movable system users. Fixed *do* works better for this textbook. Cooper (1981) introduces modal collections in Chapter 1, major mode in Chapter 5, and minor mode in Chapter 6. Chromatic pitches occur in Chapter 3 on p. 36. Fixed systems and relative movable systems work for this option. Cooper offers an alternate option of starting in Part two of his book where folk melodies occur. In choosing the alternate option, scale types occur in a different order—major mode occurs first, followed by minor mode and

modal collections. Parallel movable systems will work for the alternate option, but not so well for progressing from Chapter 1 to the end.

Two of the books do not follow either the fixed or movable model in the scales category: DeLone (1981) and Adler (1997) both introduce major and minor modes in the same chapter along with accidentals in the exercises of those chapters. These books require students trained in a movable system to use extra chromatic syllables early in the curriculum, which is difficult for beginning students. They are more manageable for fixed systems compared to movable systems, but they do not work well for beginning fixed-*do* students because of the difficulty level of using syllables in several keys¹³. They are appropriate for advanced students of any method and do not reveal a bias in this category. In Unit 1, Section 1, DeLone (1981) presents melody number one in F major with chromatic pitch B natural. It does not work well for beginning movable-system users because of the extra chromatic syllables required. DeLone's text is also challenging for beginning fixed-system users because melody number nine has five flats in the key signature. His book is appropriate for advanced students of any method and does not reveal a bias in this category. Adler (1997) suggests using a different ordering of material that affects what scales occur in early examples. He suggests that instructors have the option to "cover Chapter I and the preliminary and nonrhythmic exercises of Chapters II through VII in the first semester, the melodies from the literature in these chapters in the second semester, the newly composed, rhythmicized melodies in the third, and the more difficult intervals, alternate scales, and chords (Chapters VIII, IX, and X) in the fourth semester" (p. xi). If instructors follow those instructions, then they cover major, minor, whole-tone, and chromatic materials in the early part of semester one because they occur in the nonrhythmic exercises of Chapter II. If instructors ignore those

¹³ Hung (2012) describes keys with sharps and flats as having a higher cognitive load, which therefore makes them more difficult for fixed-system users. So, books geared toward beginners learning fixed *do* use beginning melodies predominantly in the key of C before gradually introducing new key signatures.

instructions and cover all of Chapter II, then modal melodies occur in addition to major, minor, whole-tone, and chromatic materials. Similar to DeLone's book, Adler's book is difficult for beginning movable-system users because of the abundant use of chromatic syllables and it is challenging for beginning fixed-system users because Chapter I melodies use up to four sharps or flats in the key signatures. Adler's book is appropriate for advanced students using any method. Table 6.4 shows in what chapter the scales occur in each textbook. The bold-faced text indicates first scale(s) found in first pitch-oriented chapter. Table 6.5 identifies the biases suggested by the results of scales used in the beginning of textbooks.

Table 6.4: Introduction of scales occurs in what chapter

	Pentatonic/ Pentachord	Major	Minor	Modes	Synthetic
Adler		Chapter I	Chapter I	Chapter II	Chapter II
Benjamin, Horvit, and Nelson	Unit 21	Unit 1	Unit 6	Unit 18	Unit 21
Benward	Vol 1: Ch. 10	Vol. 1: Ch. 1	Vol. 1: Ch. 2	Vol. 2: Ch. 2	Vol. 2: Ch. 6
Benward, Carr, et al	Unit 16	Unit 1	Unit 2	Unit 11	Unit 15
Berkowitz, et al		Section 1: Ch. 1, #1	Section 1: Ch. 1, #30	Section 2: Ch. 1, #307	Section 5
Bland	Ch. 2: p. 47	Ch. 2: p. 52	Chapter 7	Chapter 12	Chapter 13
Cole and Lewis		Book I Series 1	Book II Series 3	Book IV Series 11	
Cooper ¹⁴	Chapter 15	Chapter 5	Chapter 6	Chapter 1	Chapter 15
Damschroder		Chapter 1	Chapter 5		
Danhauser, Lemoine, Lavignac		Book 1A: Melody #1	Book 1A: Melody #100		
DeLone		Unit 1A: #1	Unit 1A: #4	Unit 1, B ¹⁵	Unit 4, I
Henry	Chapter 18	Chapter 2	Chapter 7	Chapter 17	Chapter 18
Horacek and Lefkoff		Series A2	Series B2		
Houlahan and Tacka	Vol. 1: p. 23	Vol. 2: p. 45	Vol. 2: p. 83	Vol. 2: p. 57	
Karpinski and Kram	Chapter 16	Chapter 2	Chapter 7	Chapter 30	Chapter 54
Krueger	Chapter 1	Chapter 2	Chapter 3	Chapter 24	
Levin and Martin	Lesson 28	Lesson 1	Lesson 6	Lesson 3	Lesson 37
Lloyd, Lloyd, DeGaetani	Chapter 7	Chapter 4	Chapter 4	Chapter 1	Chapter 7
Murphy, Phillips, et al	Chapter 3	Chapter 1	Chapter 5	Chapter 5	Chapter 35
Rogers and Ottman		Chapter 2	Chapter 5	Chapter 20	Chapter 21
Stevenson & Porterfield		Unit 1	Unit 6	Unit 16	
Thomson	Ch. 2: p. 24	Ch. 2: p. 22	Chapter 5	Chapter 12	

¹⁴ If instructors progress from Chapter 1 to the end, then modes occur in the early chapters. If instructors choose option 2 and start in Part two, then major and minor occur in the first two chapters covered.

¹⁵ DeLone introduces modes in Unit 1B. However, a modal melody occurs earlier in the text: Unit 1A, #40.

Table 6.5: Scales used suggest these biases

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler	X			X
Benjamin, Horvit, and Nelson		X		X
Benward		X		X
Benward, Carr, et al		X		X
Berkowitz, et al	X			X
Bland	X			
Cole and Lewis	X			X
Cooper ¹⁶	(X)		X	(X)
Damschroder	X			X
Danhauser, Lemoine, Lavignac	X			X
DeLone	X			X
Henry		X		X
Horacek and Lefkoff	X			X
Houlahan and Tacka			X	
Karpinski and Kram		X		X
Krueger			X	
Levin and Martin		X		X
Lloyd, Lloyd, DeGaetani				X
Murphy, Phillips, et al	X			X
Rogers and Ottman	X			X
Stevenson & Porterfield	X			X
Thomson	X			X

¹⁶ If instructors progress from Chapter 1 to the end, then fixed- and relative movable-system students work with this book. If instructors choose option 2 and start in Part two with the folk melodies, then parallel movable *do* works as well. Therefore, either fixed or movable syllable systems work with this book.

Key Signatures

Introduction of key signatures differs between the methods. Books geared toward beginners learning fixed *do* use beginning melodies predominantly in the key of C major before gradually introducing new key signatures. Many books that favor movable systems begin with melodies that are not predominantly in the key of C major and key signatures occur in a random order meaning that new key signatures differ by more than one sharp or flat from previous ones. In other movable books, the key signatures occur in a systematic order, which appears similar to fixed textbooks. A difference is that movable books often progress more quickly through the key signatures than fixed-system books (perhaps one melody per new key). That does not give fixed students enough time to become proficient in the new keys, but it is easier for movable students because key signatures with greater numbers of sharps and flats are not more difficult than ones with fewer sharps and flats.

Books that suggest a fixed bias based on the early melodies predominantly being in C major include Danhauser, Lemoine, and Lavignac (1910-1913), Cole and Lewis (1909), Levin and Martin (1988a), Horacek and Lefkoff (1989), and Damschroder (1995). Danhauser, Lemoine, and Lavignac present 108 melodies (9 preparatory exercises and 99 other exercises) in C major, before introducing 7 melodies in A minor, 5 in G major, 6 in E minor, 5 in F major, 6 in D minor, 5 in D major, 3 in B minor, etc. Cole and Lewis present 108 melodies in C major, before introducing 19 in G major, 20 in F major, 20 in D major, 20 in B-flat major, etc. Levin and Martin (1988a) introduce the key of C major in the first two lessons followed by G major and G Mixolydian in Lesson 3, D major in Lesson 4, A major in Lesson 5, A minor in Lesson 6, F major and F Lydian in Lesson 8, D minor and D Dorian in Lesson 9, and so forth. New keys occur gradually. The organization of Horacek and Lefkoff is different than the others discussed in this paragraph. Students study multiple sections for the same lesson, so the key signatures of each are of importance. The interval section [A] uses no key signatures. In the chord

progression section [C], the authors list Roman numerals for students to sing as arpeggios. Each lesson contains a collection of chord progressions to sing in one particular key and the latter lessons progress to more sharps or flats in the key signature. They begin with C major followed by G major, A minor, D minor, D major, etc. The keys are progressively more difficult for fixed-*do* students, but not for movable-*do* students. The melodies section [B] begins with melodies in C major for four pages progressing to the following keys for two pages each—A minor, F major, D minor, G major, E minor, B-flat major, G minor, D major, B minor, and so forth. The systematic order of keys indicates a fixed-system pedagogical method. Damschroder (1995) begins predominantly in C major and systematically introduces new keys. Chapter 1 contains melodies in C major, Chapter 2 presents G major and F major, Chapter 3 covers D major and B-flat major, Chapter 4 covers E-flat major and A major; Chapter 5 introduces A minor, Chapter 6 covers E minor and D minor, Chapter 7 covers B minor and G minor Chapter 8 covers F# minor and C minor, Chapter 9 covers E major, C# minor, A-flat major, and F minor, Chapter 10 covers B major, G# minor, D-flat major, and B-flat minor, Chapter 11 covers F# major, D# minor, G-flat major, and E-flat minor, and Chapter 12 covers C# major, A# minor, C-flat minor, and A-flat minor. The systematic order of keys suggests a fixed-system preference.

Movable system books tend to introduce various keys in a random order (or if it is a systematic order, the new keys occur quickly—perhaps one melody per new key or all keys occur in the first two pitch-oriented sections). Benjamin, Horvit, and Nelson (2013) use up to four sharps or flats and the keys do not occur in a systematic order in Unit 1. Benward (1989b) uses up to six sharps or flats in Unit 1. The key signatures occur in a systematic order progressing quickly considering that new key signatures occur for just one melody before changing to a different one. Benward, Carr, Greer, McKee, and Torbert (2015) use up to five sharps or flats in Unit 1. Similar to Benward (1989b), their text also presents the key signatures in a systematic order with each new key

corresponding to one melody. Again, it is not a gradual introduction of key signatures. Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) use up to four sharps or flats in their first thirty melodies. The order of key signatures is systematic, but they do not present several melodies first in C major. Also, certain new key signatures (both C major and E-flat major) occur for one melody before changing to a different key for the following melody. From the beginning in order, they present 1 melody in C major, 3 in F major, 1 in G major, 1 in D major, 1 in G major, 2 in B-flat major, 1 in D major, 1 in E-flat major, 2 in D major, 1 in F major, 2 in A major, 1 in G major, and so forth. Since the melodies at the beginning of the textbook are not predominantly in C and they do not gradually introduce new key signatures, a movable system preference occurs. Bland (1984) uses up to six sharps or flats in Chapter 2 and the key signatures occur in a random order. Henry (1997) uses up to six sharps or flats in Chapter 2 with each key occurring in a random order. Houlahan and Tacka (1991a) use up to three sharps or flats early in their book. They use a systematic order beginning with one melody in F major, one in C major, and 1 in G major. They revisit those keys in following melodies and add on new key signatures. Some of these key signatures occur for just one melody before moving to a different key for the next. In the first notated pitch-oriented section, the key signatures of B-flat major, D major, and A major occur for one melody each. This is not a fixed-*do* book because the opening melodies are not predominantly in C major and because certain new key signatures only occur for one melody before the authors introduce a new key signature. Krueger (2017) uses up to five sharps in Chapter 1 and they occur in a random order. Rogers and Ottman (2014) use up to seven sharps or flats in their second pitch-oriented chapter, which is Chapter 3. They begin by introducing keys in a systematic order with most new keys occurring for at least two melodies. It changes when they get to melodies with five or more sharps where the order becomes G-flat major (with 6 flats) for one melody, C-sharp major (7 sharps) for one melody, D-flat major (5 flats) for one melody, C-flat major (7 flats) for one melody, B major (5 sharps),

and F# major (six sharps) for two melodies. It favors movable textbooks more than fixed ones because C major melodies are not predominant, there are not enough melodies in each new key for a fixed student to gain proficiency in each, and even though the key signatures begin in a systematic order, they do not continue following that order.

Stevenson and Porterfield (1986) use up to four sharps or flats in key signatures of Unit 2 and they occur in a random order. Thomson (1981) uses up to six sharps or flats in Chapter 2 and they occur in a random order.

One textbook fits characteristics of movable and fixed system books in this category of key signatures. The order of key signatures in Karpinski and Kram (2017) is similar to fixed-*do* books by starting with 68 melodies in C major and systematically introducing keys by adding one additional sharp or flat. They introduce 68 melodies in C major followed by 6 in G major, 6 in F major, 5 in D major, 5 in B-flat major, 4 in A major, 4 in E-flat major, 3 in E major, 3 in A-flat major, 1 in B major, 1 in D-flat major, 1 in F# major, 1 in G-flat major, 1 in C# major, and 1 in C-flat major. That ordering suggests a fixed-system preference. However, all diatonic keys occur in Chapter 3, which is the second chapter of their book containing pitch materials. The early introduction of all keys implies a movable system bias. Looking at his *Manual*, Karpinski (2017) introduces melodies early in the book using protonotation, a method that notates pitch using scale-degree numbers and movable-*do* solmization syllables and rhythm using vertical lines to represent beats and horizontal lines to represent durations. The protonotation melodies do not indicate a key, so students can sing those in any key. In this category, Karpinski and Kram fit both a movable- and a fixed-system model. Movable because all major keys occur in the second pitch-oriented chapter and fixed because melodies occur first in the key of C before systematically introducing the others.

Similar to Karpinski (2017), Murphy, Phillips, Marvin, and Clendinning (2016b) also exhibit characteristics of fixed and movable system books. Chapter 1 melodies in Murphy, Phillips, Marvin, and Clendinning are all in C major. The following chapter

(Chapter 2) introduces G major and F major. Chapter 3 contains the key signatures of B-flat major, E-flat major, D major, and A major. The new key signatures occur at times in only one melody, followed by melodies in other keys, and then a return to that formerly new key signature. The number of melodies that occur in certain keys in Chapter 3 is: four melodies in B-flat major (numbers 101, 122, 126, and 132), five melodies in E-flat major (numbers 105-107, 121, and 141), four melodies in D major (numbers 128-130, and 140), and one melody in A major (number 133). Melodies in the key of A major occur in Chapter 4 in melodies 176 and 181. The systematic order and the fact that earlier melodies are predominantly in C major suggests that it works well for fixed systems, but the limited number of melodies in new keys when they first occur suggests a movable system.

Lloyd, Lloyd, and DeGaetani (1980) and Cooper (1981) present modal collections early in the book and add major and minor modes later. This approach does not work well for beginners learning parallel movable *do* because of the syllable alterations required. It works better for fixed-*do* students if there is a gradual introduction of sharps and flats. It possibly works well for relative movable-*do* students if no non-diatonic pitches occur early in the textbooks. Lloyd, Lloyd, and DeGaetani (1980) introduce modes in Chapter 1 and their melodies use up to four sharps or flats in the key signatures of Chapter 2 (with no gradual introduction of key signatures). Chromatic pitches occur early in the text in Chapter 2 on p. 13. The early introduction of chromatic pitches is difficult for relative movable system users. This text does not work well for beginning students of either fixed or movable *do*. Cooper (1981) introduces modes in Chapter 1 using up to one accidental in Chapters 1 and 2. Chromatic pitches do not occur in these chapters. Most melodies in the first chapter contain no sharps and flats. Key signatures occur in a systematic order in the first seven chapters progressing to key signatures with up to three flats or two sharps. Afterwards, keys occur in a random order. Fixed *do* and relative movable *do* work for this option because of the systematic order of keys at the

beginning and because of minimal accidentals in the modal melodies. Cooper offers an alternate option of starting in Part two of his book where folk melodies occur. In choosing the alternate option, scale types occur in a different order—major occurs in the first chapter (Chapter 12) and minor in the second chapter (Chapter 13) using key signatures with up to four flats and sharps. Parallel movable systems work for the alternate option, but not so well for progressing from Chapter one to the end.

Two of the books do not follow either the fixed or movable model in the key signatures category: DeLone (1981) and Adler (1997) contain major, minor, and modal melodies that use chromatic pitches and have key signatures containing various accidentals in melodies of the first two chapters. Adler (1997) uses up to four sharps or flats in the key signatures of Chapter II. DeLone (1981) uses up to 5 sharps or flats in the first ten melodies of Unit 1. These books require students trained in a movable system to use extra chromatic syllables early in the curriculum, which is difficult for beginning students. They are more manageable for fixed systems compared to movable systems, but they do not work well for beginning fixed-*do* students because of the difficulty level of using syllables in several keys. Adler (1997) suggests using a different ordering of material that affects what scales occur in early examples.¹⁷ If instructors follow his instructions, then they cover major, minor, whole-tone, and chromatic materials in the early part of semester one because they occur in the nonrhythmic exercises of Chapter II. If instructors ignore those instructions and cover all of Chapter II, then modal melodies occur in addition to major, minor, whole-tone, and chromatic materials. Adler's book is difficult for movable-system users because of the abundant use of chromatic syllables and it is challenging for beginning fixed-system users because Chapter I melodies use up to

¹⁷ Adler (1997) suggests that instructors could “cover Chapter I and the preliminary and nonrhythmic exercises of Chapters II through VII in the first semester, the melodies from the literature in these chapters in the second semester, the newly composed, rhythmicized melodies in the third, and the more difficult intervals, alternate scales, and chords (Chapters VIII, IX, and X) in the fourth semester” (xi).

four sharps or flats in the key signatures. No bias occurs for DeLone and Adler in this category.

Table 6.6 identifies whether or not there is a systematic ordering of key signatures and identifies textbooks that use modal melodies at the beginning. Table 6.7 shows the biases suggested by the key signatures.

Table 6.6: Systematic or random order of key signatures

	Predominantly in C major followed by systematic introduction of keys	Systematic order of keys that occur in a short time frame	Random order of keys
Adler			X- major-minor-modal
Benjamin, Horvit, and Nelson			X
Benward		X	
Benward, Carr, et al		X	
Berkowitz, et al		X	
Bland			X
Cole and Lewis	X		
Cooper ¹⁸	X- modal		X
Damschroder	X		
Danhauser, Lemoine, Lavignac	X		
DeLone			X- major-minor-modal
Henry			X
Horacek and Lefkoff	X		
Houlahan and Tacka		X	
Karpinski and Kram	X	X	
Krueger			X
Levin and Martin	X		
Lloyd, Lloyd, DeGaetani			X- modal
Murphy, Phillips, et al	X	X	
Rogers and Ottman		X	X
Stevenson & Porterfield			X
Thomson			X

¹⁸ Cooper offers an option of starting in Part two with major and minor melodies. If a class starts there, then major melodies occur in the first chapter (Chapter 12) and minor melodies occur in the second chapter (Chapter 13).

Table 6.7: Key signatures used suggest the following biases

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				
Benjamin, Horvit, and Nelson	X			
Benward	X			
Benward, Carr, et al	X			
Berkowitz, et al	X			
Bland	X			
Cole and Lewis				X
Cooper ¹⁹		(X)	X	X
Damschroder				X
Danhauser, Lemoine, Lavignac				X
DeLone				
Henry	X			
Horacek and Lefkoff				X
Houlahan and Tacka	X			
Karpinski and Kram	X			X
Krueger	X			
Levin and Martin				X
Lloyd, Lloyd, DeGaetani				
Murphy, Phillips, et al	X			X
Rogers and Ottman	X			
Stevenson & Porterfield	X			
Thomson	X			

¹⁹ Starting in Chapter 1 with modes reveals a fixed or relative minor preference. Starting in Chapter 12 using Cooper's suggestion reveals a movable system preference thereby including parallel movable *do* as a possibility.

Organization

Certain organization and ordering of materials is common within fixed and movable system textbooks. Books that work well for fixed systems use chapter headings that indicate organization around pitch-name reading, whereas books that work well for movable systems use chapter headings that indicate organization around harmonic context. This does not mean that authors of fixed systems do not find harmonic material important or that authors of movable systems do not value pitch-name reading. It just means they emphasize different topics. Some fixed- and movable-system books emphasize intervals. Among these, some fixed-system books emphasize both chromatic and diatonic intervals, whereas movable-system books will not emphasize chromatic intervals in the beginning of their textbooks.

Fixed-*do* books such as Danhauser, Lemoine, and Lavignac (1910-1913) introduce diatonic intervals from small to large at the beginning of their sight-singing textbook and later they introduce chromatic intervals. The descriptions of their books indicate a focus on pitch-name reading—twenty-eight of the thirty-four books indicate clefs used, e.g., (1A) Exercises in Treble and Bass clefs, (1C) Similar exercises to 1A, Bass clef only, (2A) Exercises in Treble and Bass clefs, Changing from one clef to the other, etc. Four of the others list voice type, one indicates French text, and the other is supplementary. The authors do not provide information about harmony or rhythm in the table of contents. Overall, their descriptions emphasize clefs or pitch-name reading. Topic headings within each volume are not listed as chapter names, but one must read through the volumes to find them. In Volume 1A of their text, one topic heading is “exercices pour l’intonation des intervalles” and another is “exercice pour l’étude du 1er dièse, *Fa*”, and “exercice pour l’étude du *Fa* dièse et de l’Ut dièse” (4, 26, 26). These descriptions emphasize intonation and fixed pitches, whereas others introduce rhythms or clefs.

The table of contents of Cole and Lewis (1909) identifies topics within each series. Topics include number of parts, identification as diatonic, chromatic, or modulatory, identification of stepwise motion or leaps, clefs, modality (major, minor, or modal), key signatures, sources of composition, and rhythms. The entry concerning identification as diatonic, chromatic, or modulatory focuses on function. The entry on clefs focuses on pitch names. The entries on identification of stepwise motion or leaps and key signatures emphasize topics common among fixed and movable methods. A closer look at these two will help identify biases. Series 1 through 4 (which is all of Book I and two-thirds of Book II) contain only stepwise melodies and Series 5 presents a “systematic treatment of intervals, beginning with the larger” (p. vii). Within the first four series, they present key signatures in a systematic order (C major, G major, F major, D major and so forth). Similarly, they present accidentals in a systematic order (F#, B-flat, C#, etc.) when they introduce non-diatonic pitches. Movable students will find the pace too slow, but fixed students will find the key signatures progressively more difficult. Therefore, stepwise motion for Series 1 to 4 and the systematic treatment of intervals in Series 5 reveal fixed pedagogical methods. When they identify the key signatures, they use descriptions such as “All major keys to B and D-flat inclusive” (p. vii). The key signatures occur in a systematic order, which is a pedagogical method of fixed system books. Only one of the categories (identification as diatonic, chromatic, or modulatory) suggests movable pedagogical methods and three (clefs, intervals, and key signatures) suggest fixed methods.

Seven of the ten chapter headings on pitch in Adler (1997) indicate intervallic organization. Adler introduces both chromatic and diatonic intervals from small to large in the beginning of his sight-singing book. Chapter II covers seconds, Chapter III presents perfect fifths and perfect fourths, Chapter IV introduces major thirds, Chapter VI covers sixths, Chapter VII presents sevenths, and Chapter VIII introduces tritones. One of the remaining chapter headings focuses on clef-reading, one on synthetic scales, and a

final chapter on chords. In the chords chapter, the focus is not on diatonic triads. The subheadings in that chapter are “like-interval chords, diverse interval chords, and planing (or paralleling) exercises” (pp. 162-167). The like-interval chords that occur are ones such as chords containing major thirds, minor thirds, perfect fourths, and perfect fifths. There are no major triads in the chords chapter, but there are augmented and diminished triads. This textbook has a large intervallic focus using non-diatonic pitches in addition to diatonic ones and it has little harmonic context focus revealing a fixed bias.

The table of contents for Stevenson and Porterfield shows that they identify concepts taught in rhythm, pitch, and clef in each unit. The inclusion of clefs and diatonic and chromatic intervals suggests a focus on pitch names implying a fixed approach, but some of the unit topics teach harmonic topics suggesting a movable approach. The first nine units emphasize diatonic and chromatic intervals and clefs supporting a fixed approach. Many of the following units emphasize harmonic context. Unit 11 introduces secondary dominants, Unit 12 introduces modulation to the dominant and subdominant, Unit 13 introduces modulation to the relative major and relative minor, Unit 14 introduces modulation to other closely related keys, Unit 15 introduces distant and transient modulations, and Unit 16 introduces modes. The way they introduce modulation by first modulating to dominant and subdominant, followed by modulating from relative major to relative minor, and then modulating to other closely-related keys suggests a harmonic approach. Their textbook combines pitch-name reading, intervallic approaches (in diatonic and non-diatonic contexts), and harmonic approaches thereby using fixed and movable pedagogical methods.

Levin and Martin’s (1988a) organization favors a fixed approach, even though their headings appear to use both movable and fixed approaches using pitch-name reading, intervallic approaches (in diatonic and chromatic contexts), and harmonic approaches. Their topic headings cover rhythm, scales, melodic intervals, pitch groups, harmonic progressions, ear training, clefs, and transposition. The melodic intervals occur

primarily in tonal contexts and the pitch groups are groups of intervals in which some are non-tonal. The non-tonal context hints at a fixed approach. Scales do not indicate a preference but harmonic progressions often receive emphasis in movable-system books. Looking closer at those two will reveal pedagogical approaches. Under scale, the authors gradually introduce new key signatures C major, G major, G Mixolydian, D major, A major, A minor, and so forth. The fact that G Mixolydian and G major occur in the same chapter along with accidentals in melodic excerpts is more difficult for students of movable systems because of the extra syllables. It is easier for students using fixed systems because they use the same syllables for both scales. Under harmonic progressions, the authors introduce C major progressions in Lesson 4 after C, G, and D major scales occur. They teach the same progression in the key of G major in the following lesson. Given the fact that they introduce the same progression in two chapters with the only difference being key signature shows that the authors make the assumption that more sharps or flats in the key signature means a higher level of difficulty. In the text, they write that “a melody using a key signature of four sharps will strike beginning musicians as harder to read than one which has none” (p. 1). These facts reveal organization favored by fixed-system users.

Three textbooks present melodies in chronological order and do not emphasize harmonic context or pitch-name reading. Lloyd, Lloyd, and DeGaetani (1980) present melodies in a chronological order. The title of each chapter indicates the time period of the music beginning with plain song notation and progressing to twentieth-century music. The subheadings indicate topics such as clefs, tones, neumes, rhythms, symbols, scale type, intervals, harmonic/melodic aspects, modulation, and new use of old scales. They take a historical approach to music and teach expectations within each style. The subheadings indicate both functional topics, intervallic topics, and note-name reading topics. However, the overall organization does not favor fixed or movable approaches.

Similar to Lloyd, Lloyd, and DeGaetani, Cooper (1981) and DeLone (1981) also organize the melodies in their textbooks in chronological orders. Cooper begins with early sacred chant of the fourth century and progresses to music since 1950 in Part I and he covers folk music in Part II. His chapter titles do not indicate fixed or movable approaches. Likewise, DeLone begins with pre-Baroque music and progresses to twentieth-century music. He covers scale-degree function, intervals, and chords in an appendix. However, the appendix is mere supplementary and does not define the organization of the textbook. Therefore, DeLone's chapter organization does not use fixed or movable methods.

Movable-*do* books often place less emphasis on pitch-name reading, but rather emphasize harmonic context. Of the 55 chapter divisions in their *Anthology*, Karpinski and Kram (2017) use chapter headings indicating topics on chords in seventeen chapters, rhythmic concepts in thirteen chapters, scale type in seven chapters, neighbor notes or skips to prefix neighbors of a specific scale-degree in four chapters, music symbols in one chapter, clefs in two chapters, and modulation in four chapters. The other chapter headings include bass lines, compound melody, transposition, chromatic passing tones, melodic sequence, stepwise chromatic alterations, and reading in keys other than the notated key signature. In the seventeen chapters on chords, there is a chapter for each diatonic chord, secondary chord, Neapolitan sixth chord, and one chapter on augmented sixth chords. Overall, their headings indicate harmonic context organization.

Murphy, Phillips, Marvin, and Clendinning (2016b) place more emphasis on harmonic context, rather than intervallic context or note-name reading when covering diatonic and chromatic harmony. They place emphasis on intervallic context when they describe twentieth-century idioms. They do not list chapter titles, but rather list melodic and rhythmic topics covered at the beginning of each chapter. The first chapter begins with stepwise melodies in Chapter 1, which indicates either method. Chapter 2 presents solfège and scale-degree numbers in transposition. The authors recommend that students

use the same syllables for the same melody in multiple transpositions. That favors a movable approach. Chapters 3-5 introduce major pentachord, major pentatonic, major scales, leaps within the tonic chord, minor pentachord, minor pentatonic, and minor scales. These chapter headings seem to favor movable system books with the early introduction of pentatonic scales and leaps within the tonic. Intervals occur in Chapter 6. After the interval chapter, triads and seventh chords occur in Chapters 7 and 8. Then, two-part counterpoint occurs for the next three chapters: Chapters 9-11. The organization of the next eight chapters is clearly harmonic context; seven of them contain the words harmonizing melodies in the description. Chapter 12 covers tonic and dominant progressions, Chapter 13 predominant harmonies, Chapter 14 second-inversion triads, Chapter 16 non-chord tones, and Chapter 17 seventh chords and diminished triads. It begins from simpler harmonic concepts to more complex. Chapters 20 to 22 covers tonicization of V, followed by tonicization of other scale degrees, and then modulation to closely-related keys. Chapters 23, 25, 29-30, and 32-33 cover various forms. Chapter 27 covers Neapolitan sixth chords and augmented sixth chords. Chapter 34 begins twentieth-century idioms. The shift to intervallic emphasis becomes evident through the description of chapter 35—"Singing with integers: chromatic, whole-tone, and octatonic collections" (497). The remaining chapters, Chapters 35 to 40, cover twentieth-century materials. Overall the organization of the diatonic and chromatic harmony chapters is by harmonic context and the organization of the twentieth-century chapters is by intervallic context, which shows a preference for movable system approaches in the majority of the book.

Rogers and Ottman (2014) mainly emphasize harmonic context in their chapter headings. When they introduce intervals, it is in the context of a diatonic chord, e.g., they teach leaps of thirds, fourths, fifths, and sixths in the major tonic triad in Chapter 3, they introduce those same leaps in the dominant triad in Chapter 6, and they introduce those same intervals in the context of predominantly subdominant and supertonic chords in

Chapter 8. Overall, the topics that receive emphasis are harmonic context in nine chapters, new rhythmic concepts in six chapters, modulation in three chapters, C-clefs in one chapter, modes in one chapter, and post-tonal music in another. The chapters that emphasize harmonic context are the following: Chapter 2 presents stepwise melodies. Stepwise melodies work for any method. Looking closer will reveal pedagogical approaches. In this chapter, the authors recommend that students sing from a member of the tonic triad to the first note of melodies that start on pitches other than tonic. That is a movable approach. Other chapters emphasize harmonic context as well: Chapters 3 and 4 introduce leaps within the major tonic triad, Chapter 5 presents leaps within minor tonic triad, Chapter 6 covers leaps within the dominant triad, and Chapter 8 teaches further use of diatonic leaps. Upon closer scrutiny, these “diatonic leaps” focus on leaps predominantly to movable syllables *fa* and *la/le* and to subdominant and supertonic triads. Chapter 9 contains leaps within the dominant seventh chord and other diatonic seventh leaps, Chapter 11 revisits leaps within tonic and dominant triads using quadruple and sextuple subdivisions of the beat, and Chapter 12 contains further use of diatonic leaps. Similar to Chapter 8, Chapter 12 focuses predominantly on leaps to movable syllables *fa* and *la/le* and to subdominant and supertonic triads with the added difficulty of quadruple and sextuple subdivisions of the beat. Toward the end of this chapter, leaps of sevenths and tritones within the dominant seventh occur along with leaps of augmented seconds. The authors describe the harmonic context of each interval to aid singing. Chapters 1, 10, 13, 14, 17, and 18 cover rhythmic concepts. The chapters that emphasize modulations are the following: Chapter 15 introduces tonicizing the dominant and modulation to the dominant or relative major, Chapter 16 introduces tonicizing any diatonic triad and modulation to closely-related keys, and Chapter 19 introduces remote modulation. The fact that they focus on modulations and tonicizations of particular scale-degrees or key relationships reveals movable pedagogical methods. Chapter 7 presents alto and tenor clef, Chapter 20 introduces the diatonic modes, and Chapter 21 covers

twentieth- and twenty-first century music. A majority of the chapters emphasize harmonic context. Therefore, Rogers and Ottman reveal a movable bias in this category.

Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) include chapter headings of “Melodies”, “Rhythm”, “Duets”, and “Sing and Play”. They do not include further details in the table of contents. In their index, they list the topics of melody (with subheadings of intervals practiced, modes and scales, and starting notes); harmony (with subheadings of chords outlined, secondary dominants and tonicizations); rhythm and meter (with subheadings of meters and rhythms); and C-Clefs. A further subdivision of chords outlined and secondary dominants include index entries for most diatonic chords (excluding the mediant triad), all secondary dominant chords, Neapolitan sixth chord, and augmented sixth chords. The C-Clef section only lists four melodies that are in alto clef and four melodies that are in tenor clef. The index does not include all melodies that use C-clefs. The authors emphasize harmonic context rather than pitch-name reading in the index. The index is incomplete: when listing diatonic intervals, they do not include thirds or fourths, which occur in the duets chapter on p. 271. The index lists diatonic intervals of fifths, sixths, sevenths, tritones, and intervals larger than an octave and it lists non-diatonic intervals of seconds up to sevenths. The headings in the index place an emphasis on harmonic context for diatonic music and intervallic context for atonal music. At various locations in the book, there are descriptions of the melodies. Notice that many of the following headings indicate harmonic organization. Chapter 1, Section 1 starts with stepwise melodies, followed by leaps in the tonic triad, skips of non-triad notes, minor scales, alto clef, leaps in minor tonic triad, skips in the IV chord, skips in the V chord, skips in the ii chord, skips in the V7 chord, skips in the vii^o triad, and skips in the vi chord. The skips of non-triadic notes contain skips to pitches that act as incomplete neighbor notes, e.g., a leap to movable syllable *la* resolves to either *sol* or *ti* and a skip to *ti* resolves to *do*. The only other skips in this section are diatonic thirds. The organization of Section 1 emphasizes harmonic context. Chapter 1, Section 2 starts with

a review of the diatonic chords learned in Section 1, followed by tenor clef, interval of a perfect fifth, all intervals, syncopation, interval of a sixth, chromatic embellishments versus chromatic diatonic notes, modulation to the relative major, chromatic passing tones, modulation to the dominant, modulation to the subdominant, secondary dominants, interval of a tritone, Neapolitan sixth chord, Augmented sixth chords, modes, minor v chord, and major lowered VII chord. The interval labels seem random. It is peculiar that after a heading of all intervals, they have a heading called interval of a sixth. It is also unusual that modulation happens before secondary dominants. Most of the textbooks either introduce both topics at the same time or present secondary chords prior to modulation. Overall, the organization of their textbook is around harmonic context showing preference for movable system approaches. Intervallic organization is evident when atonal music occurs. Throughout their book, they provide Roman numerals to identify chords implied in their melodies.

The topic headings in Houlahan and Tacka (1991a/b) list relative movable-*do* solmization in stick notation, relative movable-*do* solmization in staff notation, rhythmic concepts, types of scales, harmonic concepts, modulation, and different styles of music. The emphasis is on harmonic context. The topic headings start with a leap between *sol* and *mi* and gradually add on one new note at a time until completion of the pentatonic scale. At the end of Volume 1, the extended pentachord occurs with melodies centered on *do* and *la* using relative solmization. The next volume covers major scales, pentatonic scales beginning on different scale-steps, modes, minor, harmony of I, IV, and V chords, and modulation. Houlahan and Tacka's books cover only one year of material, so they do not cover as much as the other textbooks compared in this study. The organization of both textbooks is around harmonic context.

The topic headings in Krueger (2017) indicate a harmonic context organization. Sixteen of the twenty-four chapters indicate chords taught, five indicate types of scales, one indicates C-clefs, one covers nonharmonic tones, and another modulation. The book

starts with stepwise motion in the tonic pentachord, followed by leaps in the tonic major triad, the major scale, the minor scale, leaps in the tonic minor triad, V7 in major, V7 in minor, introduction of IV in major, introduction of iv in minor, other diatonic triads, secondary dominants, modulation, Neapolitan sixth, and modes. The organization indicates a bias toward movable systems.

The topic headings in Henry (1997) indicate a harmonic context organization in diatonic and chromatic music and an intervallic organization in twentieth-century materials. Eight of the first twelve chapters include a chord name in the title, e.g., Chapter 3: Intervals in the Tonic Triads and Chapter 4: Intervals in the Tonic and Dominant Triads. The other four of those twelve cover rhythmic concepts, major scale, minor scale, and C-clefs. After introducing primary triads, secondary triads, and secondary dominants, Henry introduces modulation in Chapters 13 and 14, borrowed, augmented, and Neapolitan chords in Chapter 15, enharmonic modulation in Chapter 16, modal collections in Chapter 17, and nontraditional melodic resources in Chapter 18. The nontraditional resources consist of octatonic scales, whole-tone scales, pentatonic scales, among others focusing on the styles of composers such as Debussy, Scriabin, and Hindemith whose music selections are tonal but push the limits of tonality. Atonal twentieth-century topics such as atonal melodies and serialism occur in Chapters 19 and 20. The emphasis in the first seventeen chapters is on harmonic context showing favor to movable system approaches. When atonal twentieth-century topics occur, the heading reads “Intervallic Singing” suggesting a shift in approach (p. 317). That is where it changes to an intervallic approach.

The chapter titles in Bland (1984) indicate a harmonic context organization. Six of his fourteen chapters contain a chord name in the title, three cover rhythmic concepts (with two of these covering complex tonal patterns), two introduce chromatic embellishments such as passing and neighbor tones, two cover modulation, and one presents C-clefs. The emphasis is on harmonic concepts. The six chord chapters are the

following: Chapter 2 “Harmonic Outlines in Melodies: The Tonic Triad,” Chapter 3 “Melodies Outlining the I and V triads,” Chapter 4 “Melodies Outlining the I and IV triads,” Chapter 5 “Melodies Outlining the I, IV, and V triads,” Chapter 8 “Melodies Outlining the Dominant Seventh Chord,” and Chapter 9 subheading “The V⁷ Chord Outline and Melodic Contour.” His book begins with rhythms, followed by skips in the tonic chord, skips in the dominant, skips in the subdominant, and a chapter that combines all three chords. From there, he introduces non-chord tones in major and minor and then the dominant seventh and modulation. His final chapters are on modes and complex tonal and rhythmic patterns. In these chapters, Bland encourages students to make reductions of more familiar patterns to aid singing the more complex melodies. Overall, there is a harmonic context organization throughout his textbook, which favors movable system approaches.

The chapter titles in Thomson (1981) indicate a focus on harmonic context. Five of the fourteen chapters focus on tonality frame, structurally important notes, or chromatic embellishments (Chapters 2, 3, 4, 10, and 11), three focus on rhythmic concepts (Chapter 1, 6, and 14), two focus on scales (Chapters 5 and 9), one on form (Chapter 7), one on C-clefs (Chapter 8), one on Modes (Chapter 12), and one on modulation (Chapter 13). Tonality frames and structurally important notes suggest harmonic thinking. When Thomson covers chromatic embellishments, he focuses on embellishments of particular scale degrees, which is a functional approach. Overall, the book favors harmonic context in its teaching methods, which is a movable system approach.

Textbooks that contain chapter headings indicating both intervallic and harmonic context exhibit characteristics of a movable system and possibly a fixed system. Benjamin, Horvit, and Nelson (2013) introduce diatonic intervals of seconds through octaves in Units 1-4. The intervals occur not just within the tonic triad, but in any diatonic location. Since the intervals are not chromatic, a bias is not evident regarding

intervals. Only a movable system preference (not fixed) becomes apparent. Diatonic chords occur in Units 3 to 9 and then chromatics, secondary dominant chords, and modulation occur in Units 12 and 14 through 16. Two units mention clefs in the heading: Units 5 and 18. The part of the book covering common-practice music emphasizes intervallic and harmonic contextual approaches, but not note-name reading. The latter part of the book covers twentieth-century idioms and favors an intervallic approach. Unit 21 covers exotic scales, Unit 22 contains quartal harmony, Unit 24 introduces interval music, and Unit 25 consists of serial music.

The topic headings of Horacek and Lefkoff (1989) indicate characteristics of both movable and fixed systems. Part A focuses on intervallic singing and intervallic dictation, Part B focuses on melodic dictation and melodic sight singing, and Parts C and D focus on harmonic dictation and harmonic sight singing where students sing arpeggios of chords. The intervals in Part A are diatonic and chromatic, which suggests a fixed-system approach; the chords in Part C suggest a functional/movable approach.

Damschroder (1995) also contains chapter headings indicating organization around intervallic and harmonic contexts. The headings identify topics such as intervals, chords and their inversions, clefs, note values, keys, scales, meters, cadences, and more. Chords and their inversions suggest functional approaches, whereas clefs, diatonic and chromatic intervals, and keys suggest fixed approaches. Keys are in the fixed category because Damschroder presents C major first followed by the other keys in a systematic order (C, G, F, D, B-flat, etc). Twelve chapters contain a chord name in the chapter description, fifteen chapters contain intervals in their description, and six chapters refer to certain inversions of chords (Chapters 4, 8, 12, 13, 16, and 18). In this book, most diatonic chords occur in separate chapters. Chapter 1 introduces the tonic chord, Chapter 2 presents the dominant chord, Chapter 3 covers the subdominant chord, Chapter 7 introduces the dominant seventh chord, Chapter 10 presents the leading-tone chord, Chapter 11 introduces the supertonic and submediant chords, Chapter 14 covers other

seventh chords, Chapter 15 teaches applied chords, Chapter 17 presents mediant and subtonic chords, Chapter 20 introduces diminished seventh chords, Chapter 25 covers Neapolitan chords, and Chapter 26 presents Augmented sixth chords. When Damschroder introduces intervals, the melodies containing those intervals are diatonic, but the isolated intervallic practice is not diatonic. In the practice exercises, the author instructs students to sing a certain interval above and below a given pitch. Practice on diatonic and chromatic intervals early in the curriculum indicates a fixed pedagogical method. Intervals occur in the following chapters: Chapter 1 covers intervals of major thirds and perfect fifths, Chapter 2 covers perfect fourths and perfect octaves, Chapter 3 covers minor seconds, Chapter 4 covers simple and compound intervals, Chapter 5 covers minor thirds, Chapter 6 covers augmented seconds, Chapter 7 covers minor sevenths and tritones, Chapter 8 covers minor sixths, Chapter 9 covers major sixths, Chapter 14 covers major sevenths, Chapter 21 presents major and minor ninths, Chapter 22 introduces major and minor tenths and perfect and augmented elevenths, Chapter 23 covers diminished and perfect twelfths and major and minor thirteenthths, Chapter 24 presents diminished, minor, and major fourteenthths, and Chapter 25 covers perfect fifteenthths. The focus on diatonic and chromatic intervals early in the curriculum along with clefs and systematic order of keys reveals fixed pedagogical methods and the chord emphasis reveals movable pedagogical methods.

Benward (1989a/b) uses both an intervallic and harmonic focus. Each chapter's heading indicates intervals, harmonies, and rhythms learned. Additional chapter headings identify style type or describe a musical feature such as modulation, two-voice melodies, suspensions and so forth. Benward (1989b) presents particular intervals within the diatonic chord in Chapter 1. He also includes intervals in isolation in that same chapter, but all of the melodies contain diatonic pitches. The harmonic context suggests a functional approach. However, accidentals occur in the melodies of Chapter 3 forcing students to use an intervallic approach in those melodies. Intervals occur from small to

large in Benward's textbook: Chapter 1 introduces major and minor seconds and major and minor thirds, Chapter 2 adds on perfect fourths and perfect fifths, Chapter 4 presents major and minor sixths, Chapter 5 covers augmented fourths and diminished fifths, and Chapter 6 presents major and minor sevenths. In Chapters 1 and 2, the chromatic interval work is limited to sections focusing on intervals. In Chapter 3, the chromatics work their way into the melodies making it more difficult for movable students. There is also a harmonic emphasis in this book. Chords occur in the following chapters: Chapter 1 introduces I and V chords, Chapter 2 presents I, IV, and V chords, Chapter 3 adds on ii chords, Chapter 5 covers vii^o chords, Chapter 6 presents vi/VI chords, Chapter 7 introduces iii chords, Chapter 10 covers V⁷ chords, Chapter 11 introduces secondary dominant and secondary leading-tone chords of V and ii, and Chapter 12 presents all secondary chords. Benward's chapter descriptions indicate topics emphasized by both fixed and movable system books.

Benward, Carr, Greer, McKee, and Torbert (2015) begin with a harmonic focus in Unit 1 where they study particular intervals within the tonic triad, but then they depart from that approach in Unit 4 favoring an intervallic approach. Intervals occur in both diatonic and chromatic contexts in Unit 4, which is easier for fixed-system students because the extra chromatic syllables are difficult for beginning movable-system students. In the table of contents, each unit generally provides information regarding intervals under study; indication of diatonic, chromatic, or modulatory passages; indication of key signatures; indication of tonality or modality (major, minor or modal); sources of composition; clefs; and rhythms. Only the first three units indicate a harmonic context—the intervals found in those chapters occur within the tonic triad. Intervals ranging from seconds to sevenths occur in Units 1 to 8, the tritone occur in Units 9 and 10, the diminished seventh and augmented second occur in Unit 11, the augmented sixth and diminished third occur in Unit 12, the diminished fourth occur in Unit 13, and all intervals occur in the remaining units (14 to 16) with a focus on twentieth-century

idioms. This textbook contains a combination of fixed and movable approaches. Table 6.8 shows the results of textbook organization and Table 6.9 shows the biases revealed by the results of textbook organization.

Table 6.8: Chapter headings indicate organization

	Pitch-Name Reading	Intervallic (Chromatic intervals occur early in book)	Harmonic Context	Chromatic Intervals and Harmonic Context	None of these options. It does not indicate a bias.
Adler		X			
Benjamin, Horvit, and Nelson			X		
Benward				X	
Benward, Carr, et al				X	
Berkowitz, et al			X		
Bland			X		
Cole and Lewis	X				
Cooper					X
Damschroder				X	
Danhauser, Lemoine, Lavignac	X				
DeLone					X
Henry			X		
Horacek and Lefkoff				X	
Houlahan and Tacka			X		
Karpinski and Kram			X		
Krueger			X		
Levin and Martin		X			
Lloyd, Lloyd, DeGaetani					X
Murphy, Phillips, et al			X		
Rogers and Ottman			X		
Stevenson & Porterfield				X	
Thomson			X		

Table 6.9: Chapter headings reveal the following biases

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				X
Benjamin, Horvit, and Nelson	X			
Benward	X			X
Benward, Carr, et al	X			X
Berkowitz, et al	X			
Bland	X			
Cole and Lewis				X
Cooper				
Damschroder	X			X
Danhauser, Lemoine, Lavignac				X
DeLone				
Henry	X			
Horacek and Lefkoff	X			X
Houlahan and Tacka	X			
Karpinski and Kram	X			
Krueger	X			
Levin and Martin				X
Lloyd, Lloyd, DeGaetani				
Murphy, Phillips, et al	X			
Rogers and Ottman	X			
Stevenson & Porterfield	X			X
Thomson	X			

Characteristics of Melodies Early in Textbook

Movable and fixed-system textbooks frequently present diatonic and stepwise melodies early but they differ in how they present intervals²⁰. In books favoring fixed solmization, the melodies at the beginning are often diatonic and stepwise or they outline specific chromatic intervals, whereas in books favoring movable solmization, the melodies at the beginning are often diatonic and stepwise or they outline diatonic triads. Books that favor both approaches will use melodies that are diatonic, outline specific intervals, and outline diatonic triads in melodies early in the textbook. If the textbooks use stepwise melodies and outline specific diatonic intervals, then key signatures and scales used in the first two pitch-oriented chapters will aid in determining the bias.

Fixed-*do* proponents, Cole and Lewis (1909) use stepwise, diatonic melodies in the first two series of their textbook. Stepwise melodies continue through the end of Series 4 out of 11. Series 1 begins with C major melodies, gradually adds one sharp or flat to the key signature, and progresses to five sharps and five flats by the end of series 2. Series 3 introduces chromatic non-diatonic pitches systematically beginning with F#, B-flat, C#, E-flat, etc. The order of keys is progressively more difficult for fixed students, but not movable students. The pace of their books moves too slowly for movable methods (considering the lack of leaps in the first four series). The slow pace suggests that the students are to focus on the absolute pitch of each note, which aligns with fixed systems. Danhauser, Lemoine, and Lavignac (1910-1913) and Stevenson and Porterfield (1986) use stepwise, diatonic melodies and ones that outline specific intervals at the beginning of their textbook. Danhauser, Lemoine, and Lavignac begin with three scalar exercises. Melody I is a scalar exercise that begins by singing whole-note *do* four times and rests by singing a whole-note on *do*. Next, sing whole note for each pitch from *do* to *re* four times and rest by singing a whole-note on *do*. Then, sing a whole note for each

²⁰ Stepwise melodies are easier for beginning students. Gordon (1993) finds “it easier for students to perform tonal patterns that incorporate smaller intervals” (p. 186) and more difficult to perform larger intervals.

pitch *do, re, mi, re* four times, rest by singing a whole-note on *do*, and continue until the full scale occurs. Melodies II and III are also stepwise scalar exercises. Melody IV is an intervallic exercise focusing on seconds, Melody V focuses on thirds, Melody VI focuses on fourths, Melody VII focuses on fifths, Melody VIII focuses on sixths, and Melody IX focuses on octaves. Sevenths occur a few pages later. The authors indicate that students should sing most patterns of Melodies I to IX four times. This repetition suggests a focus on absolute pitch, which is a focus of many fixed-*do* books. Stevenson and Porterfield introduce major and minor seconds in Unit 1, seconds and thirds in Unit 2, and fourths and fifths in Unit 3. The exercises are non-diatonic, but the melodies are all diatonic. The presence of both chromatic and diatonic exercises suggests a fixed approach.

Horacek and Lefkoff (1989) begin by introducing intervals from small to large in diatonic and non-diatonic contexts. This text works better for fixed-system students because the extra chromatic syllables are more difficult for beginning movable-system students.

The following textbooks do not fit characteristics of beginning-level movable- or fixed-system books. Cooper (1981), DeLone (1981), and Lloyd, Lloyd, and DeGaetani (1980) begin with melodies that leap to any diatonic interval. Cooper's first two melodies are in D Dorian and contain leaps of thirds, fourths, and fifths between various members of the mode such as a leap of $\hat{7}$ (C natural) up to $\hat{3}$ (F natural). DeLone's first melody on p. 12 is in F major and contains various leaps including the leap of a minor sixth from $\hat{6}$ up to $\hat{4}$ and it includes a chromatic pitch of raised $\hat{4}$. In Lloyd, Lloyd, and DeGaetani, Chapter 1 melodies contain leaps of thirds, fourths, and fifths between various scale-degrees using a four-line staff and Chapter 2 melodies are modal and contain leaps of sixths in addition to smaller intervals, e.g. melody 2.9 is in A minor and contains a leap from $\hat{2}$ (B) up to $\hat{7}$ (G natural) followed by stepwise descending motion to tonic. These leaps are difficult for beginning students. Adler (1997) uses stepwise melodies, ones outlining the tonic triad, and leaps of a specific chromatic or diatonic interval. The tonic leaps suggest a movable-system approach. However, the chromatic

intervallic leaps more strongly favor a fixed-syllable approach because chromatic syllables are difficult for beginning movable-system students. The melodies in this section are modal, major, minor, whole-tone, and chromatic, which is difficult for beginning fixed-system students. His text is too difficult for beginning movable- and fixed-system students.

The following textbooks exhibit characteristics found in textbooks favoring both movable and fixed systems (however in some books, a feature strongly suggests a preference for one system). Levin and Martin (1988a) begin with stepwise melodies, ones that outline the tonic triad, leaps of specific diatonic intervals, and groups of intervals in which some are non-tonal. This indicates either a fixed or movable approach. Henry (1997) uses stepwise melodies and melodies that outline a diatonic third in Chapter 2. The thirds are diatonic, not chromatic. He introduces leaps within the tonic triad in Chapter 3 and the dominant triad in Chapter 4. The characteristics of earlier melodies suggest a movable method for his book. Benjamin, Horvit, and Nelson (2013) use stepwise melodies in Unit 1 and then leaps of thirds and fourths in Unit 2, which indicates either approach. The intervals are all diatonic intervals. They introduce the tonic triad in Unit 3 revealing a movable approach. Similarly, Thomson (1981) uses stepwise melodies, melodies outlining the tonic, and melodies outlining specific intervals of thirds, fourths, and fifths in a diatonic context in Unit 2. His textbook favors movable approaches. Benward, Carr, Greer, McKee, Torbert (2015) begin with melodies favoring a functional approach, where the melodies are stepwise and outline the tonic, and an intervallic approach, where pitches occur in non-diatonic contexts. The isolated intervals do not occur in the melodies in the first three units, so a functional approach works for those units. In Unit 4, chromatic pitches infiltrate the melodies, which favor an intervallic approach. Movable and fixed approaches occur in their book. The melodies in Benward (1989b) are similar to the ones in Benward, Carr, Greer, McKee, and Torbert. He begins with stepwise melodies followed by melodies that outline the tonic triad and

non-diatonic interval exercises. The melodies in the first two chapters are diatonic, but some in Chapter 3 contain non-diatonic pitches. Both fixed and movable systems methods receive emphasis in this book.

Books that exhibit characteristics found in textbooks favoring movable systems are Karpinski and Kram (2017), Krueger (2017), Murphy, Phillips, Marvin, and Clendinning (2016b), Rogers and Ottman (2014), Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017), Damschroder (1995) and Bland (1984), which use diatonic, stepwise melodies and ones that outline diatonic triads. Houlahan and Tacka (1991a) leap among the pentatonic scale, which suggests a *la*-based minor bias because the only textbooks that introduce pentatonic melodies at the beginning of the textbook are ones that favor *la*-based minor movable *do*. Table 6.10 shows the characteristics observed in the textbooks and Table 6.11 shows the biases suggested by those characteristics.

Table 6.10: Characteristics of melodies early in textbook

	Stepwise	Leaps among the tonic triad	Leaps among pentatonic scale	Leaps of a specific interval	Major, minor, modal, synthetic scales	C major followed by gradual systematic order of keys
Adler	X	X		X- chromatic	X	
Benjamin, Horvit, and Nelson	X	X		X		
Benward	X	X		X- chromatic		
Benward, Carr, et al	X	X		X- chromatic		
Berkowitz, et al	X	X				
Bland	X	X				
Cole and Lewis	X					X
Cooper	X			X- any leap		X (modal)
Damschroder	X	X				X
Danhauser, Lemoine, Lavignac	X			X		X
DeLone	X	X		X- any leap		
Henry	X	X		X		
Horacek and Lefkoff				X- chromatic		X
Houlahan and Tacka			X			
Karpinski and Kram	X	X				X
Krueger	X	X				
Levin and Martin	X	X		X- chromatic		X
Lloyd, Lloyd, DeGaetani	X			X- any leap		
Murphy, Phillips, et al	X	X				X
Rogers and Ottman	X	X				
Stevenson & Porterfield	X			X		
Thomson	X	X		X		

Table 6.11: Biases suggested by characteristics of melodies early in textbook

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				
Benjamin, Horvit, and Nelson	X			
Benward	X			X
Benward, Carr, et al	X			X
Berkowitz, et al	X			
Bland	X			
Cole and Lewis				X
Cooper				
Damschroder	X			
Danhauser, Lemoine, Lavignac				X
DeLone				
Henry	X			
Horacek and Lefkoff				X
Houlahan and Tacka			X	
Karpinski and Kram	X			
Krueger	X			
Levin and Martin	X			X
Lloyd, Lloyd, DeGaetani				
Murphy, Phillips, et al	X			
Rogers and Ottman	X			
Stevenson & Porterfield				X
Thomson	X			

Minor Mode

The introduction of minor mode melodies almost always follows major melodies in sight-singing textbooks favoring either fixed or movable solmization systems. In textbooks favoring fixed *do*, minor follows major using either a relative or a parallel approach. One feature that is unique in this category in fixed books is that accidentals or key signatures often occur in a systematic order. Within the movable category, the introduction of the minor mode is often different in each system. Some *la*-based minor textbooks introduce pentatonic melodies that leap down to low *la* first before introducing a minor scale and they favor a relative approach. *La*-based minor books frequently introduce minor in a chapter separate from major melodies. *Do*-based minor textbooks introduce it with a minor scale (not pentatonic) and favor a parallel approach.

Books favoring a fixed approach in this category are Levin and Martin (1988a), Horacek and Lefkoff (1989), Danhauser, Lemoine, and Lavignace (1910-1913), and Cole and Lewis (1909). Levin and Martin introduce the keys in a systematic order beginning with C major followed by G major and G Mixolydian, D major, and A major. They present each mode in the same chapter as a similar scale. After A major, they teach A minor, which emphasizes a parallel relationship between the two. Following A minor are F major and F Lydian, D minor and D Dorian, E minor and E Phrygian, B minor and B Locrian, and so forth. Students of fixed systems find this organization easier than movable system students because the pairing of modes with similar scales requires the same syllables for fixed system students, but extra syllables for parallel movable system students and two sets of syllables for relative movable students e.g., one where *do* is tonic in F major and *fa* is tonic in F Lydian. Horacek and Lefkoff present C major for four pages, followed by A minor for two pages, F major for two pages, D minor for two pages, G major for two pages, E minor for two pages, and so forth. When keys with higher numbers of sharps or flats occur, the pitch material in the melodies is not more difficult. For instance, after teaching modulation, the authors present keys with four or

more sharps or flats, which contain no modulations or non-diatonic pitches on pp. 378-395. That implies that the additional sharps or flats make these melodies more complex, which is an assumption of fixed-system books. Danhauser, Lemoine, and Lavignac introduce minor through a relative approach. They present the keys in a systematic order. Following 108 exercises in C major, there are 11 melodies in A minor, followed by 8 melodies in G major, 7 melodies in E minor, 7 in F major, 6 in D minor, and so forth. The A minor exercises are the first exercises in the book outside of the key of C. The order of the keys makes more sense for fixed *do* rather than movable *do* because movable-*do* instructors typically teach C major plus other major keys before introducing minor keys. One could argue that a relative movable system works with this order of keys, but the fact that 108 melodies occur in C major before any other key is very unusual for relative movable-*do* instructors. Similarly, Cole and Lewis (1909) introduce minor through a systematic approach, but it is through the accidentals chosen, rather than key signatures. All melodies of this section are stepwise. The authors introduce chromatics through a graded approach introducing F#, followed by B-flat, C#, E-flat, A-flat, G#, etc. The earlier melodies of this section are diatonic major keys, followed by major keys that use non-chord tones, then mode mixture, and minor. The first melody that is clearly in a minor key occurs after G# occurs in the key of A minor in number 77 (p. 47).

Books favoring a relative approach include Krueger (2017) and Houlahan/Tacka (1991a/b). Krueger first introduces major from a major pentachord and tonic triad. Then, she presents minor from a minor pentachord and tonic triad. She places minor in a separate chapter when introducing it and even uses separate chapters when introducing dominant chords in major and minor, i.e. Chapter 9: “I and V7 in major mode” and Chapter 10: “i and V7 in minor mode.” Houlahan and Tacka introduce minor in a separate chapter from major. In earlier chapters, the melody steps down from *do* to *la* using relative solmization. In those sections, the melodies sound minor and they use

relative solmization syllables. Following the melodies that move from *do* to *la*, they introduce pentatonic melodies beginning on relative syllable *la*, and then minor scales.

Other books that share similarities with the relative approach books are Murphy, Phillips, Marvin, and Clendinning (2016b), Rogers and Ottman (2014), Bland (1984), and Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017). Similar to relative textbooks, Murphy, Phillips, Marvin, and Clendinning present minor first as a pentachord. The difference is that they also introduce the upper major tetrachord completing the minor scale at the same point in the text where the lower pentachord occurs. In addition to using the full scale when introducing minor, they list parallel solmization in their textbook, which strongly favors a parallel movable-*do* approach. Similar to relative textbooks, Rogers and Ottman present only minor melodies in the chapter introducing minor. When leaps in the dominant occur, the leaps occur first in major melodies and then they occur in minor melodies before major and minor are in the same section. A feature strongly suggesting a parallel minor preference is that Rogers and Ottman compare a D major triad to a D minor triad at the beginning of the minor chapter and list parallel solmization under the pitches of a D minor triad arpeggio. Syllables listed in a textbook reveal its bias. Their textbook favors a parallel movable system. Similar to relative textbooks, Bland presents minor in a separate chapter. However, Bland presents the whole minor scale, rather than a pentachord or pentatonic scale, and discusses structural goals in the minor scale. In this category, his book works with either parallel movable *do* because of his emphasis on structural goals and relative movable *do* because of minor occurring in a separate chapter from major. Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone introduce minor separate from major. However, on the same page where minor occurs, the instructions refer students to supplementary exercises on page 415 where melodies occur in major and minor modes sharing a parallel relationship. In addition, on the page (page 11) where the introduction of minor occurs, they recommend that movable-*do* users use *me*, *le*, and *te*. In this

category, there is a parallel movable *do* preference. Thomson (1981) introduces major and minor exercises sharing both relative and parallel relationships using up to six sharps or five flats. He suggests that students sing “using numbers or *sol-fa* syllables” (p. 68). On a previous page, Thomson indicates that functional names (tonic, supertonic, mediant, etc.) “are used interchangeably with scale-degree numbers and *sol-fa* syllables” (p. 65), which indicates that *sol-fa* syllables are a parallel movable system in his book.

Proponents of *do*-based minor often emphasize parallel relationships. Some fixed books also emphasize parallel relationships, but fixed ones present accidentals or key signatures in a systematic order. The following do not present accidentals or minor key signatures in a systematic ordering, but they do emphasize parallel relationships, which aligns with expectations of parallel movable-*do* textbooks. Karpinski (2017) introduces both relative and parallel syllables when teaching minor in the *Manual*, but he states that “this [textbook] is not a *la*-based minor book” (p. xviii). In their *Anthology*, Karpinski and Kram (2017) include a major melody sharing a parallel relationship to a minor melody,²¹ none sharing a relative relationship, and they include a variety of key signatures not in a systematic order in the chapter introducing minor. Benjamin, Horvit, and Nelson (2013) use melodies with both parallel and relative relationships when introducing minor. Seven out of eight melodies in the preliminary exercises are in either C major or C minor, whereas two out of eight are in C major or A minor. Those numbers add up to nine because one melody (in C major) applies to both categories. More of the melodies share a parallel relationship. Following these eight preliminary exercises are melodies in the keys of C minor, A minor, C# minor, E minor, B-flat minor, etc. The order of the keys does not fit a systematic ordering. Therefore, this textbook does not contain characteristic of fixed methods for this category, but rather movable methods. Henry (1997) introduces minor by comparing minor to its parallel major and describing

²¹ Melody numbers 297 and 298 in Karpinski and Kram (2017) share a parallel relationship.

scale-degree tendencies. Numerous exercises of his textbook compare the parallel minor to major emphasizing a parallel approach and he presents melodies in a variety of keys not in a systematic order. His book aligns with movable methods in this category.

Benward (1989b) presents minor in a subsection of Chapter 2 and does not indicate the intervallic content of the minor scale (perhaps assuming that students have knowledge of the components of minor scales). Neither parallel nor relative relationships receive emphasis, but Benward emphasizes knowing the locations of $\hat{1}$, $\hat{3}$, and $\hat{5}$ stressing that students do not need to think about intervals. The harmonic emphasis suggests a movable approach. There is no systematic order to the key signatures in his book.

Some books contain characteristics of both fixed and movable methods.

Benward, Carr, Greer, McKee, and Torbert (2015) use melodies containing both a parallel and relative relationship. Their table of contents indicates keys of melodic fragments in various sections. Notice the systematic order of key signatures—first they list melodies in G major and G minor, followed by D Major and D minor, then A major and A minor, F major and D minor, B-flat major and B-flat minor, E-flat major and C minor, E major and E minor, C minor and C major, and A-flat major and F minor. They start by adding one sharp to each major key signature and then adding one flat to each major key signature. This looks similar to orderings found in fixed method books.

However, the authors intersperse melodies using other key signatures that are not in this list. They introduce melodies in the minor keys of G, E, D, A, C, B, F#, and F in Unit 3 after covering G minor and D minor from the list above. This latter fact reveals that the order is not systematic. Therefore, the book uses a pedagogical method of movable-system books, not of fixed-system books in this category.

Damschroder (1995) introduces minor using methods common to both movable and fixed approaches. He begins Chapter 5 (the chapter covering minor mode) by defining the terms relative and parallel relationships. All of the melodies in Chapter 5 are in A minor and do not share relative nor parallel relationships. Later, he presents keys

related by relative relationships such as E major and C# minor, A-flat major and F minor, B major and G# minor, and so forth seeming to favor relative relationships, which one might expect with relative movable *do*. However, he systematically introduces all of the keys, which one expects with fixed *do*. Although, the new keys do not receive much emphasis when he introduces them because there are few melodies in the new keys with other keys interspersed. For instance in Chapter 9 where E major, C# minor, A-flat major, and F minor occur for the first time, seven out of sixteen melodies²² are in one of those keys: two are in E major, three in C# minor, one in A-flat major, and one in F minor. Most fixed students will not gain proficiency in these new keys if they only have just one to three melodies in each key. In this category, Damschroder fits both a movable- and a fixed-pedagogical preference.

Some books do not fit into either category. Stevenson and Porterfield (1986) introduce minor in comparison to its parallel major. Following that, minor-mode melodies occur in a variety of keys not sharing a relative or parallel relationship. Adler (1997) emphasizes neither parallel nor relative relationships and does not introduce accidentals or key signatures in a systematic way. His textbook does not favor a fixed or movable method in this category. Two of the books that present melodies in chronological order, Cooper (1981) and DeLone (1981), use neither relative nor parallel relationships nor are the keys introduced systematically. The other book that presents melodies in chronological order, Lloyd, Lloyd, and DeGaetani (1980), introduces major and minor in the same chapter following modal melodies. They present those scales as a scale system that supersedes the modes. Two of the melodies happen to share a parallel relationship, but most exercises do not share relative or parallel relationships. This book does not emphasize movable or fixed methods in the way that the authors present minor.

²² Melodies S9-1 and S9-2 are in F major, S9-3 is E major, S9-4 is E-flat major, S9-5 is G minor, S9-6 is A minor, S9-7 is C# minor, S9-8 is E major, S9-9 and S9-10 are C# minor, S9-11 is F minor, S9-12 is A-flat major, S9-13 is A major, S9-14 is A minor, S9-15 is G major, and S9-16 is C major.

Table 6.12 shows the results of the characteristics of the introduction of minor modes in the textbooks. Some have multiple boxes marked. If textbooks use both relative and parallel approaches and one of those approaches receives greater emphasis, then two boxes receive marks: (1) marking both relative relationship and parallel relationship and (2) showing which method, relative relationship or parallel relationship, receives greater emphasis. Table 6.13 draws conclusions on the minor mode characteristics and suggests what pedagogical methods the books follow in this category.

Table 6.12: Introduction of minor mode characteristics

	Systematic order of sharps and flats in key signatures	Introduced in separate chapter (no major keyed melodies)	Relative relationship	Parallel relationship	Neither relative relationship nor parallel relationship	Both relative relationship and parallel relationship
Adler					X	
Benjamin, Horvit, and Nelson				X		X
Benward					X	
Benward, Carr, et al						X
Berkowitz, et al		X		X- syllables		
Bland		X				
Cole and Lewis	X			X		X
Cooper					X	
Damschroder	X		X			
Danhauser, Lemoine, Lavignac	X		X			
DeLone					X	
Henry				X		
Horacek and Lefkoff	X		X			
Houlahan and Tacka		X	X			
Karpinski and Kram				X		X
Krueger		X	X			
Levin and Martin	X			X		
Lloyd, Lloyd, DeGaetani				X		
Murphy, Phillips, et al				X- syllables		X
Rogers and Ottman		X		X- syllables	X	
Stevenson & Porterfield				X		
Thomson						X

Table 6.13: Minor mode characteristics suggest the following approaches

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				
Benjamin, Horvit, and Nelson	X	X		
Benward	X			
Benward, Carr, et al	X			
Berkowitz, et al		X		
Bland	X			
Cole and Lewis				X
Cooper				
Damschroder			X	X
Danhauser, Lemoine, Lavignac				X
DeLone				
Henry		X		
Horacek and Lefkoff				X
Houlahan and Tacka			X	
Karpinski and Kram	X	X		
Krueger			X	
Levin and Martin				X
Lloyd, Lloyd, DeGaetani				
Murphy, Phillips, et al		X		
Rogers and Ottman		X		
Stevenson & Porterfield				
Thomson		X		

Modal Collections

Most textbooks introduce modal collections following major and minor modes. However, five of the textbooks introduce modes first or very early in the textbooks. Students of movable and fixed systems will have difficulty in the beginning stages of sight singing using syllables and learning the sounds of each “unfamiliar” mode. Fixed-system and relative movable-system students fare better than parallel movable-system students because early use of modes in fixed-system and relative movable-system classes requires no extra syllables, whereas parallel movable-system classes require extra chromatic syllables, which is difficult for beginning students.²³ If chromatic, non-diatonic pitches occur in these same melodies, relative movable system students experience more difficulty than fixed student students due to extra syllables. Books that introduce modes in the first two pitch-oriented chapters and use diatonic pitches (no chromatic, non-diatonic ones) work for students using fixed or relative movable-system syllables. Books that introduce modes early in the book and contain non-diatonic tones work better for students of fixed systems rather than students of movable systems.

Five books that introduce modes towards the beginning include Adler (1997), Levin and Martin (1988a), Cooper (1981), DeLone (1981), and Lloyd, Lloyd, and DeGaetani (1980). Adler first uses modal melodies in Chapter II even though modes do not occur as a chapter heading until chapter IX. Several Chapter II melodies contain accidentals, which is difficult for relative movable system students. His book works better with fixed-system students. Levin and Martin introduce Mixolydian mode in Lesson 3. Most melodies in Lesson 3 are in G major or G Mixolydian. One of the melodies begins in C major, contains chromatic pitch, F#, and modulates to G major.

²³ As indicated earlier, Murphy, Phillips, Marvin, and Clendinning (2016b) find that using parallel syllables requires that students “assign chromatic solfege syllables to pitches that often appear without a written sharp or flat” and those who use relative syllables are using a method that is “often easier for reading modal melodies because there are no chromatic syllables to assign to notated pitches” (p. 65). Gordon (1993) concurs that parallel syllables are more difficult than relative syllables because parallel syllables requires students to learn chromatic syllables to sing in tonalities other than major (p. 269).

The keys reveal an approach that works for fixed-system students because most beginning students of relative movable systems will struggle with non-diatonic pitches early in the first semester. Modes occur in Chapter 1 of Cooper, in Unit 1A of DeLone, and in Chapter 1 of Lloyd, Lloyd, DeGaetani. Chromatic non-diatonic pitches occur early in DeLone and Lloyd, Lloyd, and DeGaetani, which is difficult for relative movable system users (DeLone 1981, 14; Lloyd, Lloyd, and DeGaetani 1980, 13) but later in Cooper (1981, 36). The early use of modes and chromatics suggests that the books of DeLone and Lloyd, Lloyd, and DeGaetani work with fixed-system students. The early use of modes, but late introduction of non-diatonic pitches suggests that Cooper works with students of fixed-*do* or relative movable-*do*.

Fixed system books and movable system books introduce modes in similar ways: (1) they define the intervallic content of the modes, (2) they compare the modes to major and minor scales, and (3) they present melodies in relative or parallel relationships. If syllables occur in the text, those syllables indicate a preference. There are features that indicate biases for the different movable systems. In some *la*-based minor books, prior to the introduction of modes, subsets occur as pentatonic scales starting on different scale degrees, e.g., pentatonic on *re*, pentatonic on *mi*, etc. In the instructions, some *la*-based minor proponents indicate that key signatures determine the syllables solmized. In *do*-based minor, the modes often occur using either parallel or relative relationships, but emphasizing parallel relationships. They frequently emphasize the chordal functions or scale-degree tendencies.

Three books that contain characteristics suggestive of a relative movable-*do* approach include Krueger (2017), Houlahan and Tacka (1991 a/b), and Benjamin, Horvit, and Nelson (2013). Krueger presents pentachord melodies starting on scale-degrees from tonic up to the leading-tone prior to introducing modes. She also emphasizes relative syllables when introducing modal scales: On three pages, pp. 607-609, she lists the relative syllables (with Dorian mode starting on $\hat{2}/re$, Phrygian mode on $\hat{3}/mi$, etc.) for

each modal scale three times. Then, she lists three additional choices of syllables according to a major/minor classification system on the bottom portion of p. 609: Krueger lists parallel movable-*do* syllables, scale-degree numbers, and hybrid relative minor syllables in which she identifies each mode as a major or minor type using *do*-major/*la*-minor syllables, e.g. Dorian is a minor type and uses syllables $\hat{1}/la$, $\hat{2}/ti$, $\hat{3}/do$, $\hat{4}/re$, $\hat{5}/mi$, $\hat{6}/fi$, $\hat{7}/sol$. Krueger presents each mode one time using the major/minor classification syllables. There is more emphasis on relative movable system syllables. Houlahan and Tacka present pentatonic melodies on *re* prior to introducing Dorian mode. Likewise, they present pentatonic melodies on *la* prior to introducing Aeolian mode, and so forth. In their textbook, they write the syllables of each modal scale using relative syllables and *do*- or *la*-based syllables depending on whether it is a major or minor type of mode, e.g. Dorian mode syllables are *re-mi-fa-so-la-ti-do-re* or *la-ti-do-re-mi-fi-so-la*. Benjamin, Horvit, and Nelson (2013) write “In singing modal music, one may determine the syllable name for the tonic note from the key signature. For example, *mi* would be the name of the tonic note in Phrygian mode and *sol* would be the tonic note in the Mixolydian mode” (p. 268). That indicates a relative movable system preference when singing modal melodies.

Books that emphasize chord function, scale-degree function, and parallel relationships when introducing modes indicate parallel movable system methods. Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) present modes in parallel relationships and then describe characteristics of chords in the modes. Henry (1997) writes “Your success in singing functional modal melodies will be enhanced if you know the inherent melodic tendencies” (p. 277). These emphasize parallel movable system methods.

Two of the textbooks list instructions for both parallel and relative movable *do*, which suggests either method, but the description could strongly reveal a bias for one method. Karpinski (2017) presents both relative and parallel movable system syllables

when introducing modes. He agrees with a common criticism of relative movable *do*—“With relative solmization, each mode will require you to associate the scale degrees with different sets of syllables” (p. 238). Instead, he prefers parallel movable *do*. He writes “If you label the tonic or final in all parallel modes as $\hat{1}/do$, similar syllables will reflect similar functions” (p. 246). His *Manual* clearly favors parallel movable systems. In their *Anthology*, Karpinski and Kram (2017) present modal melodies in relative and parallel relationships, which indicate no preferred system. Murphy, Phillips, Marvin, and Clendinning (2016b) describe two options of syllables when singing modes: (1) parallel because our ears recognize major and minor types of modes and (2) relative because it is easier when the modal melodies are diatonic. Therefore, there are no chromatic syllables. The exercises they provide share both relative and parallel relationships. Their textbook favors a movable method, but does not strongly suggest one over the other.

Textbooks that describe two categories of modes—major-type and minor-type indicate either movable or fixed methods. Benward, Carr, Greer, McKee, and Torbert (2015), Stevenson and Porterfield (1986), and Rogers and Ottman (2014) describe two categories of modes and provide melodies sharing either relative or parallel relationships. These books subscribe to methods commonly used in fixed and movable methods in the mode category.

Books that emphasize the unique intervallic structure in modal scales do not reveal a bias in this category. Thomson (1981) states “But the remaining modes have no counterparts in the major or minor scales....it is important to remember that each mode has its own unique sound and structure” (p. 223). Bland (1984) writes “Each of these modes is identifiable by its unique arrangement of whole and half steps” (p. 287).

One textbook does not provide written descriptions of the modes, but gives instructions for singing them. Benward (1989a) recommends that students “[sing] these modal melodies using the solfeggio or number system requested by your instructor” (p.

30). These instructions indicate using some system, but they do not indicate whether that means a movable or a fixed system.

Four books do not provide instructions. Cole and Lewis (1909) present modes in Book IV, Series 11. Four of the melodies share a relative relationship and the remaining do not share relative or parallel relationships. That indicates either a fixed system or movable system preference. Danhauser, Lemoine, and Lavignac (1910-1913), Damschroder (1995), and Horacek and Lefkoff (1989) do not include modal melodies. These textbooks indicate no bias in this category. Table 6.14 presents characteristics of modal melodies in books that introduce modes in the beginning and Table 6.15 identifies characteristics of modal melodies in books that introduce modes after the first three pitch-oriented sections. Table 6.16 shows the pedagogical approaches the textbooks take with introducing modes.

Table 6.14: Introduction of modal collections occurs early in textbook

	No chromatic pitches occur in the modal melodies of the first three pitch-oriented sections	Chromatic pitches occur in the modal melodies of the first three pitch-oriented sections
Adler		X
Benjamin, Horvit, and Nelson		
Benward		
Benward, Carr, et al		
Berkowitz, et al		
Bland		
Cole and Lewis		
Cooper	X	
Damschroder		
Danhauser, Lemoine, Lavignac		
DeLone		X
Henry		
Horacek and Lefkoff		
Houlahan and Tacka		
Karpinski and Kram		
Krueger		
Levin and Martin		X
Lloyd, Lloyd, DeGaetani		X
Murphy, Phillips, et al		
Rogers and Ottman		
Stevenson & Porterfield		
Thomson		

Table 6.15: Introduction of modes occurs after the first three pitch-oriented sections

	Prior to modes, subsets and pentatonic scales occur on various scale degrees	Lists <i>la</i> -minor syllables	Melodies share relative relationships	Emphasize chord function, scale-degree function, and parallel relationships	Lists <i>do</i> -minor syllables	Share parallel and relative relationships	Emphasize unique intervallic structure or recommend using any system
Adler							
Benjamin, Horvit, and Nelson		X					
Benward							X
Benward, Carr, et al						X	
Berkowitz, et al				X			
Bland							X
Cole and Lewis			X				
Cooper							
Damschroder							
Danhauser, Lemoine, Lavignac							
DeLone							
Henry				X			
Horacek and Lefkoff							
Houlahan and Tacka	X	X					
Karpinski and Kram		X		X	X		
Krueger	X	X			X		
Levin and Martin							
Lloyd, Lloyd, DeGaetani							
Murphy, Phillips, et al		X			X	X	
Rogers and Ottman						X	
Stevenson & Porterfield						X	
Thomson							X

Table 6.16: Introduction of modes demonstrates the following teaching approaches

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				X
Benjamin, Horvit, and Nelson			X	
Benward	X			X
Benward, Carr, et al	X			X
Berkowitz, et al		X		
Bland	X			X
Cole and Lewis	X			X
Cooper			X	X
Damschroder				
Danhauser, Lemoine, Lavignac				
DeLone				X
Henry		X		
Horacek and Lefkoff				
Houlahan and Tacka			X	
Karpinski and Kram		<i>Manual X</i>		
Krueger			X	
Levin and Martin				X
Lloyd, Lloyd, DeGaetani				X
Murphy, Phillips, et al	X			
Rogers and Ottman	X			X
Stevenson & Porterfield	X			X
Thomson	X			X

Applied Chords, Tonicization, and Modulation

Textbooks favoring fixed systems often introduce applied chords in one of two ways: (1) they occur through the systematic introduction of chromatics prior to modulation and (2) they occur in the same chapter as modulation without an introduction as a separate topic. The introduction of them is not obvious because applied chords do not frequently appear as a subject heading in fixed books, but they simply occur. Often the focus of fixed books is on note-name reading and sometimes absolute pitch rather than harmonic topics such as applied chords. If fixed books use approaches that teach the harmonic concept of applied chords, they often present the sharps and flats in a systematic order. Some fixed textbooks describe modulation as a change in tonic, but they do not describe how to find the precise location of modulation or where to change syllables.

The following books follow fixed system approaches when teaching applied chords, tonicization, and modulation: Adler (1997), Benward (1989b), Benward, Carr, Greer, McKee, and Torbert (2016), Cole and Lewis (1909), Danhauser, Lemoine, and Lavignac (1910-1913), Cooper (1981), and Lloyd, Lloyd, and DeGaetani (1980). Adler presents chromatic exercises and melodies focusing on major and minor seconds in Chapter II. His melodies imply secondary dominant chords and he uses no sharps or flats in the key signatures. Benward, Carr, Greer, McKee, and Torbert present chromatic alterations (implying secondary chords) in Unit 9, Section C in melodies using no sharps or flats in the key signatures. The authors transposed the melodies to C to assist in “seeing and hearing notes outside the diatonic framework” (p. 159). C major is an easier key for fixed-system students. Cole and Lewis present chromatic alterations (implying secondary chords) in Book 2, Series 3 and introduce modulation in Book 2, Series 4. After they present key signatures in a systematic order (C major, G major, F major, D major, and so forth) in Series 1, they present accidentals (with some implying secondary dominant chords) in a systematic order, F#, B-flat, C#, etc., in Series 3. The melodies in

their book at this point are all stepwise. No leaps occur until after the introduction of modulations in their book, so the focus is on major and minor seconds. The systematic order of accidentals is a common approach of fixed-system books. Danhauser, Lemoine, and Lavignac introduce chromatic alterations differently. In Book 1B, the chromatic alterations occur first in stepwise melodies with each accidental introduced one at a time (in melody numbers 74 to 85). They first present sharps in the following order: F#, C#, G#, D#, and A# and then they present flats in this order: B-flat, E-flat, A-flat, D-flat, and G-flat. After the introduction of sharps and flats, the authors present melodies that contain chromatic pitches implying secondary chords or modulations, e.g. melody number 94 modulates from G major to C major. The starting key signatures of melodies implying secondary dominant chords or modulating (numbers 86 to 122) occur in a systematic order: C major (86-89), followed by A minor (90-92), G major (93-97), E minor (97-102), F major (103-107), D minor (108-110) etc. Systematic order of accidentals and key signatures is a common method found in fixed-system books. Cooper's text (a book that presents melodies in a chronological order) presents modal melodies that do not use accidentals early in the book. In Chapter 4, non-diatonic pitches that imply applied chords occur with up to two sharps or flats in the key signatures. In the same chapter, Cooper recommends using fixed *do* for melodies by Machaut and Landini (p. 40). Lloyd, Lloyd, and DeGaetani (a book containing melodies in chronological order) present chromatic alterations, which sometimes imply secondary dominant chords in Unit 2 with melodies containing up to one sharp or flat in the key signature. In the same unit, the authors recommend singing single-part exercises on letter names first and then scale degree-numbers (p. 13) and singing duets on neutral syllable, *la* (p. 15). This book emphasizes fixed pedagogical methods.

Textbooks favoring movable methods frequently include applied chords, tonicization, and modulation as topic headings. Teaching applied chords and tonicization encourages functional listening, which is a primary goal of movable systems. When

modulation occurs, the authors frequently include directions on when to change syllables or where the modulation precisely occurs. Within the movable systems, *do*-based minor and *la*-based minor textbooks often teach applied chords and modulation differently. The functions between syllable names of major and minor remain the same in *do*-based minor. However, they change in *la*-based minor. Textbooks favoring *do*-based minor often present new material in major and minor keys, whereas *la*-based minor frequently presents material first in a major key before presenting it in a minor key, e.g. applied chords to the dominant often occur first in major keys before minor keys in textbooks favoring relative movable systems.

The following textbooks show favor to parallel movable system methods because they use both major and minor key signatures within these sections, and they stress the importance of locating the point of modulation: Benjamin, Horvit, and Nelson (2013), Karpinski (2017), Henry (1997), Murphy, Phillips, Marvin, and Clendinning (2016b), Stevenson and Porterfield (1986), Damschroder (1995), and Thomson (1981). Benjamin, Horvit, and Nelson write “In preparing these exercises, it will be necessary to determine the keys involved and the point of modulation” (p. 182). Karpinski provides a separate chapter for applied chords to each scale-degree as building blocks to teaching modulation. In his instructions for modulation he states “When sight reading or listening to melodies that modulate, you must reorient from the original key to the new one, but the precise point at which you do this can remain flexible” (p. 345). After describing three types of modulation (common chord, chromatic, and phrase), Henry writes “When a melody modulates, you must begin hearing pitches in the new key at some point. The choice of the pivot pitch is important” (p. 187). In their instructions regarding singing modulating melodies, Murphy, Phillips, Marvin, and Clendinning write “For the following melodies, first identify the starting key. Next, scan the melody for chromatic pitches that suggest a new key, and make a mental note of the syllables applied to them. Finally, identify a point in the melody where you will switch to the new key” (p. 304).

Stevenson and Porterfield write “The most effective way of successfully performing most modulations to near-related keys is to find a pitch common to both keys. To choose the best note to use as a pivot, find the chromatic alteration and then the closest preceding note common to both keys. Then, mentally change your pitch orientation on that note toward the new tonic” (p. 191). Damschroder (1995) introduces applied chords, tonicization, and modulation in the same chapter, but he presents the specific key areas tonicized in separate chapters: Chapter 15 presents applied chords and modulation to the dominant, Chapter 21 introduces applied chords and modulation to the supertonic, Chapter 22 covers applied chords and modulation to the subdominant, Chapter 23 contains applied chords and modulation to the mediant, and Chapter 24 teaches applied chords and modulation to the submediant. Both major and minor melodies occur in each section with key signatures containing up to four or more sharps or flats suggesting a parallel movable system approach. Damschroder provides instructions for singing using movable and fixed systems when introducing applied chords and modulation to the dominant, but the overall method he uses favors a movable system approach. An odd feature of this book is that Damschroder introduces the mediant chord in Chapter 17 after introducing applied chords and modulation to the dominant. Thomson (1981) presents chromatic embellishments of particular scale-degrees with some of them implying secondary dominants in Chapters 10 and 11. The melodies are in major and minor keys. Modulation occurs in Chapter 13 where Thomson indicates the pivot note and identifies the scale-degree number in the old and then the new key. His book evinces characteristics of parallel movable systems.

La-based minor proponents, Houlihan and Tacka (1991a/b) do not explicitly teach secondary dominant chords. Chromatics implying secondary dominant chords occur in Section 13 of 19 in Volume 2 and modulation occurs in Section 17 in the same volume. When modulation occurs, a majority of exercises modulate from a major key to the major dominant and the authors identify the pivot note labeling the solmization

syllable in the old key and the new key of the first five melodies. Only one melody modulates to the relative minor. A change in syllables is not necessary for students solmizing modulation to the relative minor using relative movable syllables. Their textbook does not explore other modulations. Another book that uses pedagogical teaching methods associated with relative movable systems is Krueger. When introducing secondary dominant chords, Krueger (2017) first introduces raised $\hat{4}$ in major keys for fifteen exercises (p. 553) before she introduces raised $\hat{4}$ in minor keys for ten exercises (p. 557). She next presents lowered $\hat{7}$ in major keys (p. 559), raised $\hat{1}$ in major keys (p. 563), raised $\hat{2}$ in major keys (p. 566), raised $\hat{3}$ in minor keys (p. 567), followed by secondary dominant exercises combining the concepts just taught with the addition of raised $\hat{6}$ (p. 568). However, when introducing modulation, she introduces both major and minor keys (p. 575), which favors a parallel movable system approach. Her book uses approaches associated with parallel and relative movable systems.

Other books use methods associated with both parallel and relative movable systems: Bland (1984) presents applied chords in chapters titled “Chromatic Variables in the Major Mode” (p. 127) and “Chromatic Variables in the Minor Mode” (p. 151) using up to six sharps or flats in the key signature. Then, he presents modulations containing a mixture of both major and minor keys (p. 253). Likewise, Rogers and Ottman (2014) present applied chords in sections devoted to either major or minor—one section is “Tonicization of V in major keys” and another is “Tonicization of III and modulation to the relative major from minor keys” (pp. 238, 245). Then, they present modulation using both major and minor keys in a section titled “Modulation to the dominant from major and minor keys” (250). Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) introduce modulation before secondary dominant chords. They present modulation from the minor to the relative major (p. 64), followed by modulation to the dominant in major keys (p. 68) using up to five flats or sharps in the key signatures. Then, they present

applied chords in both major and minor keys. These textbooks emphasize both relative and parallel movable system methods.

A number of textbooks blend elements of fixed and movable approaches. The melodic characteristics and harmonic progression topics do not correlate in Levin and Martin (1988a). Modulation occurs as a topic heading first in Lesson 25 when teaching harmonic concepts and secondary dominant occurs first in Lesson 31. However, both of these concepts occur earlier in the melodic singing material. Melody number five in Lesson 3 begins in C major, contains an F# that tonicizes G, and then cadences in C major. Melody number two in Lesson 4 begins in G major, modulates to D major, and then arrives back to G major. Melody number three in Review 3 (following Lesson 15) begins in D major, modulates to A major, and modulates back to D major. In the harmonic progression sections, the authors present modulation to the dominant in Lesson 25, modulation to the subdominant in Lesson 26, modulation to the mediant in Lesson 27, and modulation to the submediant in Lesson 28. In Lessons 31 and 32, they introduce all secondary dominants in the key of C major. The latter fact (of all in C major) suggests a fixed approach along with the fact that modulation and applied chords gradually occur as the authors systematically introduce new keys and accidentals. However, separate chapters for modulation to a specific key area imply a movable approach. In this category, the book reveals biases of both movable and fixed methods. An odd feature to note about this text is that they present dominant seventh chords after modulation and secondary dominants.

Horacek and Lefkoff (1989) present applied chords in D12 and modulation in B12. The ordering of materials is unknown because the authors indicate that instructors have an option of presenting material in a different order. Students will study the material in each section of A, B, and C-D simultaneously given the fact that one section (A) covers intervals, another (B) contains melodies, and two other sections (C and D) consist of chords. In D12, they list chord progressions for the students to sing as

arpeggios. Each lesson contains five progressions all sung in the same key, e.g., five progressions in D12-1 are in D major, five progressions in D12-2 are in C major, and so forth. The key signatures do not go beyond two sharps or flats. The low number of sharps or flats in the key signatures suggests a fixed approach. However, the fact that the authors introduce chord progressions shows a functional approach, which is possible with a fixed system approach. When teaching modulation, they do not provide instructions on locating a modulation, but rather they indicate modulations with symbols. Overall, there is evidence of fixed and movable approaches.

The following book does not support pedagogical methods used of either fixed or movable systems in this category. DeLone (1981) recommends singing melodies with chromatic alterations in Unit 2 on *la* or *ta*. Earlier in his book, accidentals (which imply applied chords) creep into the melodies. Melody number 1 contains a raised $\hat{4}$ and melody number 35 modulates. The early use of non-diatonic pitches is difficult for beginning ear-training students. It is more manageable for fixed-system students than for movable-system students because early use of chromatic syllables requires extra syllables for movable students creating a higher level of difficulty for them. Melody number 9 has five flats, which is difficult for beginning fixed system students. As the author recommends, neutral syllables works best for Delone's textbook. Table 6.17 reveals the pedagogical approaches used when teaching tonicization, applied chords, and modulation.

Table 6.17: Introduction of tonicization and modulation reveals the following approaches

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				X
Benjamin, Horvit, and Nelson		X		
Benward				X
Benward, Carr, et al				X
Berkowitz, et al	X			
Bland	X			
Cole and Lewis				X
Cooper				X
Damschroder		X		
Danhauser, Lemoine, Lavignac				X
DeLone				
Henry		X		
Horacek and Lefkoff	X			X
Houlahan and Tacka			X	
Karpinski and Kram		X		
Krueger	X			
Levin and Martin	X			X
Lloyd, Lloyd, DeGaetani				X
Murphy, Phillips, et al		X		
Rogers and Ottman	X			
Stevenson & Porterfield		X		
Thomson		X		

Repertoire

The styles of music used in each textbook are helpful in determining biases. In movable systems, Rogers (1997) writes that *la*-based minor movable *do* works well for modal and folk-song literature and that *do*-based minor works well for tonal music (xviii-xix). Tonal music occurs in fixed books as well. Therefore, the presence of common-practice music plus an emphasis on functional hearing indicates a parallel movable system bias. Books favoring relative movable systems contain more folk-song and pre-common practice period literature²⁴ than other styles.

Blum (1968) states that fixed system books ought to present “intervals in non-tonal as well as tonal settings” (p. 90) If this is the case, then tonal as well as non-tonal music must occur early in instruction, which produces greater amounts of non-tonal music in fixed system books. Some books favoring fixed systems present more chromatic and non-tonal music than movable system books. The only time that a high amount of chromatic and non-tonal music does not indicate a fixed bias is when the authors explicitly suggest movable solmization in that context.

Calculations will show the percentage of music composed by the authors and music of various time periods within the textbooks in Table 6.18. If the percentage of melodies composed by the authors is a majority, then the results do not reveal a bias. However, looking at what music the authors chose, even in books with a high amount of exercises composed by the authors, hints at a bias. Table 6.19 will exclude music composed by the authors from the chart and will show percentages of the music composed during different time periods within each textbook. Table 6.20 will show the biases for this category.

This study counted the number of pitched melodies (not isolated rhythms) when tallying the repertoire because the focus is on pitched music. Some books are anthologies

²⁴ Renaissance music is an example of pre-common practice literature that does not have a strong sense of scale-degree function.

containing predominantly literature pieces, so all pieces are a part of the calculations, whereas others provide instructions for singing, followed by exercises to prepare students to sing melodies, and then melodies. Some of these preparation exercises are quite short (two or three notes in length) or scalar. They are not part of the calculations, but the longer exercises are. Folk music and anonymous are two designations that need explanation. The folk music category consists of folk songs, traditional songs, hymns, dances, and tunes of various countries. The anonymous category includes unidentified composers. There was an attempt to find the dates of all the excerpts. The dates of some pieces are unknowable.²⁵

Adler (1997) contains instrumental and vocal works. Nonrhythmic exercises, melodies, and duets were part of the calculations, but short exercises (two or three notes in length) called preparatory exercises, scales, and rhythmic exercises were not part of the calculations. There are 240 pitched excerpts composed by the authors and 192 melodies from the literature. A higher percentage, 55.6 percent, of exercises composed by the authors occurs in this textbook in comparison to 44.4 percent exercises from the literature. Therefore, no bias occurs in this category. If one looks closer at the repertoire not including the exercises composed by the authors, there is a fairly high percentage, 47.9 percent, of Romantic and later music. That type of music contains greater amounts of non-chord tones, which hints at a fixed-system preference. In support of this fixed-system preference are characteristics of the exercises composed by the authors: Many of the nonrhythmic exercises, composed by the authors, present intervals in non-diatonic and diatonic contexts. In fact, the first twelve exercises (pp. 19-22) are non-diatonic followed by twenty diatonic ones (pp. 23-26); the focus of the first twelve exercises are on major and minor seconds out of context followed by scalar passages in context. If

²⁵ When identifying unknown pieces, I searched Barlow and Morgenstern (1948) *A Dictionary of Music Themes* for instrumental works and their (1950) *A Dictionary of Opera and Song Themes* for vocal works. If unsuccessful through those books, then I contacted the publisher(s) and author(s) of the textbooks if their contact information was available.

Blum's statement (that intervals ought to occur in both non-tonal and tonal settings in fixed books) is true, then these exercises composed by the author show support of a fixed-system preference. Throughout the book, intervals occur primarily from small to large in both diatonic and non-diatonic contexts. There is little emphasis on function.

Benjamin, Horvit, and Nelson (2013) contain only vocal works. They claim that the exercises composed by the authors use instrumental idioms, but there is no instrumental literature. Melodic exercises, part music, canons, duets, trios, pieces from the literature, and sing-and-play exercises were part of the calculations, but preliminary exercises (exercises that isolate specific melodic and harmonic issues) and rhythmic ones were not part of the calculations. There are high percentages of melodies composed by the authors, 88 percent, compared to 12 percent of pieces from the literature. Therefore, no bias occurs in this category. A closer look at the other melodies will show if the book hints at a method. The bulk of their exercises from the literature are of the common-practice period. Their instructions at the beginning recommend using tonal patterns and they even suggest relative movable syllables (pp. xiv, 268). That aligns with approaches of movable system users.

Benward (1989a/b) contains vocal and instrumental works. Pitched melodies were part of the calculations, but rhythm only and dictation exercises were not. Exercises composed by the author comprise 40.1 percent and the remaining 59.9 percent are from the literature. Of the 59.9 percent, common-practice music comprises 38.5 percent and Romantic through twenty-first century music comprises 23.5 percent. If considering only music from the literature, those percentages are near 65 percent for common-practice music and 40 percent for Romantic and later. Both are fairly high. High amounts of common-practice music suggest movable approaches if accompanied by recommendations of functional hearing and a sizable amount of Romantic through twenty-first century music suggests fixed approaches if there are no suggestions of movable systems for Romantic through twenty-first century music. Melodies focus on

harmonic concepts in early chapters suggesting a movable approach whereas there are no suggestions of movable systems for chromatic music suggesting a fixed approach. In support of fixed- and movable-system preferences are characteristics of the exercises composed by the author: Looking at the passages composed by the author reveals that the melodies in the first two chapters emphasize stepwise motion and some outline the tonic. However, exercises in these chapters outline specific intervals from seconds up to fifths in diatonic and non-diatonic contexts. In Chapter 3, non-diatonic and diatonic intervals occur in the melodies as well. These results evince movable methods and fixed methods; movable because of the sizable amount of common-practice music and the emphasis on function and fixed because of the amount of nineteenth through twenty-first century music and non-diatonic characteristics of exercises in Chapters 1, 3, and others.

Benward, Carr, Greer, McKee, and Torbert (2015) contain vocal and instrumental works. All pitched exercises were part of the calculations, but isolated rhythm exercises were not. Six of the diatonic/chromatic models appear four times in different transpositions (pp. 4-5, 57, 79, 248), fifteen appear three times (pp. 57, 78-79, 100, 119, 120, 135, 177), and two appear twice (pp. 4, 136). In those cases, the multiple transpositions of one pattern counted as one melody. Four melodies in the improvisation sections use melodies already presented shortly before the respective improvisation section as the basis for improvisation (pp. 24, 42, 59, 60). Those repeated melodies were not part of the calculations. Their book consists of 173 exercises composed by the authors, which is 21.8 percent, and 622 exercises from the literature, which is 78.2 percent. Of the 78.2 percent, common-practice music comprises 50.1 percent of the melodies and Romantic, twentieth-century and twenty-first century music comprises 34.1 percent. When considering just music from the literature, the common-practice excerpts total 64 percent and the Romantic and twentieth and twenty-first century music total 43.6 percent. Both are fairly high. High amounts of common-practice music suggest movable approaches if accompanied by recommendations of functional hearing and a sizable

amount of Romantic through twenty-first century music suggests fixed approaches if there are no suggestions of movable systems for Romantic through twenty-first century music. Melodies focus on harmonic concepts in early chapters and there are no suggestions of movable systems for chromatic music. In support of this fixed- and movable-system preference are characteristics of the exercises composed by the authors: The melodies in Units 1 to 3 are diatonic and leap among tonic and dominant triads, which suggests a functional or movable approach. Section B “Diatonic Models and Melodic Fragments” of each unit contains exercises focusing on specific intervals, which indicates either a movable or fixed approach. Section B exercises in Units 1 and 2 are diatonic and Section B exercises in Unit 3 contain non-diatonic pitches. These non-diatonic pitches creep into other sections, e.g. on p. 62 in Unit 4, Section C, number two, there is an excerpt that contains a raised $\hat{4}$. Also, on p. 85 in Unit 5, Section D, number three, there is an excerpt in G major that contains a minor sixth leap from $\hat{2}$ up to lowered $\hat{7}$. This occurs in the same chapter introducing leaps of major and minor sixths. Those leaps occur in diatonic and non-diatonic contexts. Units 1 to 3 begin with a tonal approach, which favors movable approaches, but it changes to a chromatic intervallic approach in Unit 4 revealing a fixed approach as well. The repertoire reveals pieces expected in both fixed and movable approaches.

Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) contain mostly exercises composed by the authors, 88.5 percent, and a small amount, 11.5 percent, of literature pieces from vocal and instrumental repertoires. Melodies, duets, supplementary exercises, and sing-and-play exercises were part of the calculations, but isolated rhythm exercises were not. Only 100/757 melodies in Chapter 1 and 27/128 sing-and-play excerpts in Chapter 4 are from the literature. Therefore, no bias occurs in this category. Considering just literature, most melodies, 43 percent, are from the Romantic period. There are 69.8 percent of music from the common-practice period and 65.8 percent of music from the nineteenth- through the twenty-first centuries. These percentages suggest

both fixed and movable methods. A closer look at the exercises composed by the authors reveals movable system approaches for tonal music and fixed system approaches for atonal music: Chapter 1, Section I starts with stepwise melodies, followed by leaps in the tonic triad, leaps in minor tonic triad, leaps in various other chords, among others. Section I emphasizes harmonic topics rather than pitch-name reading, which favors movable methods. Chromatic intervallic topics receive emphasis when atonal music occurs in Section V. However, the low amount of literature in this book does not reveal a bias in the repertoire category.

Bland (1984) uses only pieces composed by the author, even though he draws reductions based on Schenkerian analysis. His book contains 100 percent of pieces composed by the author, which does not reveal a bias in this category.

Cole and Lewis (1909) consists of mostly exercises composed by the authors, 82.7 percent, and a small amount, 17.3 percent, of literature pieces from vocal and instrumental repertoires. Of the 17.3 percent literature pieces, 10.6 are from the Romantic period revealing that a majority of literature pieces are from that period. There are no twentieth-century pieces, perhaps because the book's publication was in 1909. The high percentage of exercises composed by the authors leads to the conclusion that no bias occurs in this category. A closer look at the music from the literature reveals there is a high percentage of common-practice music at 97.7 percent and Romantic music at 61.3 percent. High amounts of common-practice music suggest either a fixed or movable approach (movable when accompanied by recommendations of functional listening). High amounts of Romantic suggest a fixed approach. The exercises composed by the authors reveal characteristics of a fixed approach. The first eighty pages of the book (which includes all of Book I and two-thirds of Book II) present materials in stepwise motion in order to focus on difficult rhythms and absolute pitch. Melodies in C major occur for the first 108 melodies before systemically introducing the other keys. Likewise, the authors introduce chromatics in a systematic order: F#, followed by B-flat,

C#, E-flat, A-flat, G#, etc. The systematic order of key signatures plus chromatic pitches suggests a fixed approach. Overall, there is no bias in the repertoire category because the newly composed music percentage is greater than 50 percent.

Cooper (1981) is an anthology of vocal sight-singing excerpts. There are no excerpts composed by the author and no instrumental works. There is a fair amount of folk music and music of the pre-common practice period, which one expects in books favoring relative movable *do*. Folk music plus the pre-common practice period adds up to 60.1 percent (Folk 30% + Medieval 20.6% + Renaissance 9.5%). Similarly, there is a fair amount of folk music and music of the common-practice period (Folk 30% + 29.6% common-practice music), which implies a movable system preference (either parallel or relative) if accompanied by an emphasis on function. Otherwise, it works well for fixed system users. Cooper does not explicitly recommend functional hearing. He recommends using both movable and fixed systems. Cooper places the folk music at the end of his book, which seems to deemphasize those and place more of an emphasis on earlier melodies. His book roughly presents equal divisions of the various time periods if one excludes folk and divides the Medieval Time period in half with the first part comprising early music up to the 1199 and the second part containing 1200-1450. The textbook excerpts are 9.5 percent (early-1200); 11 percent (1200-1450); 9.5 percent (1450-1600); 11 percent (1600-1750); 6.3 percent (1750-1820); 12.2 percent (1820-1900) and 10.6 percent (twentieth and twenty-first centuries). The average mean is 10.01 percent. Equal division implies any system because the goal of sight singing is to prepare students to sing all music.

Damschroder (1995) contains a mixture of instrumental, vocal, and pieces composed by the author. Solo melodies, accompanied melodies, and duets were part of the calculations, but isolated rhythms, isolated intervals, and dictation exercises were not. About 31 percent are composed by the author and 69 percent are from the literature. Of these percentages, 69 percent are music of the common-practice period and 41 percent

are music of the Romantic era. High amounts of common-practice music suggest movable approaches if accompanied by recommendations of functional hearing and a sizable amount of Romantic through twenty-first century music suggests fixed approaches if there are no suggestions of movable systems for Romantic through twenty-first century music. Support of both movable and fixed methods is that they provide instructions for users of each system throughout the text. Additional evidence of movable approaches is that function and chords receive emphasis and support of fixed approaches is that keys occur in a systematic order.

Danhauser, Lemoine, and Lavignac (1910-1913) contain a mix of pieces composed by the authors and instrumental and vocal literature pieces. More than 50 percent of the excerpts are Romantic music. Significant portions of the Romantic-era music are possibly pedagogical exercises—the compilers and publisher, L. Lemoine, Lavignac, Carulli, and H. Lemoine, wrote 20.86 percent of the melodies. Professors of music at conservatoires in Paris, Rome, Antwerp, Mexico among various locations wrote others. Auguste Panseron, instructor at the Conservatory of Paris known for writing pedagogical exercises, wrote 7.8 percent of the total melodies. That means that of the 58.1 percent of Romantic music, at least 28.66 percent could have been composed for pedagogical purposes and 29.44 percent remains in the Romantic music category. However, that cannot be determined with certainty. If one goes by the 58.1 percent of Romantic music, then that suggests either a fixed- or movable-system bias (movable if accompanied by emphasis on function). There is no explicit recommendation of functional thinking, so it does not show a movable-system preference. If one goes by the assumption that those exercises are composed by the authors or pedagogical exercises and adds them to the newly composed category, then total composed by the authors is 30.93 percent and there are 29.44 percent Romantic music, 28.05 percent Classical music, 10.97 percent Baroque music, and fewer than one percent folk music. That shows high amounts of common-practice music and much lower amounts of Romantic music.

Characteristics of the exercises composed by the authors reveal a fixed-system approach: major and minor modes occur in systematic ordering beginning with C major, followed by A minor, G major, E minor, F, major, D minor, and so forth; there is an emphasis on fixed pitch in exercises at the beginning of the book (sing patterns four times), and there is an intervallic rather than harmonic focus. It is important to note that the publication date of these volumes was early in the 1900s, so that is why they contain no twentieth-century music. Overall, this category reveals repertoire expected in books embracing fixed methods.

DeLone (1981) consists of examples predominantly from the literature ranging from plainchant through the twentieth century using both instrumental and vocal repertoires. Only 4.3 percent is composed by the author. Each time period is roughly equally represented by 12.65 percent with percentages deviating about three percent. Medieval is 10 percent, Renaissance is 11.1 percent, Baroque is 15.2 percent, Classical is 13.9 percent, Romantic is 16.4 percent, and twentieth- and twenty-first century is 9.3 percent. The equal division of excerpts reveals a bias toward any system (fixed or movable) in this category.

Henry (1997) consists of predominantly exercises composed by the author totaling 58.6 percent and a smaller percentage, 41.4 percent, of vocal and instrumental exercises from the Renaissance to the twentieth and twenty-first centuries. The high percentage of exercises composed by the author leads to the conclusion that no bias occurs in this category. Singing studies, exercises, literature, and ensemble pieces were part of the calculations, but singing warm-ups and isolated rhythm exercises were not. The singing warm-ups are often scalar patterns. Dates are unknowable for two of the composers, A.J. Morrison and Hans Wachsmann. They account for approximately 0.5 percent, which does not significantly affect the results. A closer look at the music from the literature will show if it hints at a method. Of the 41.4 percent of pieces from the literature, 27.7 are from the common-practice era and 22.2 are from the nineteenth

through twenty-first centuries. Considering just literature, those percentages are 64.4 common-practice period and 51.3 nineteenth to twenty-first century. Those are fairly high. Characteristics of the exercises composed by the author reveal movable methods for much of the book and fixed methods for atonal excerpts in the final unit: the earlier melodies use up to six sharps or flats in the key signature, they are stepwise, outline thirds, and outline tonic and dominant chords. Since the amount of exercises composed by the author is greater than fifty percent, no bias occurs in this category.

Horacek and Lefkoff (1989) use only pieces composed by the authors. Using 100 percent exercises composed by the authors does not reveal a bias in this category.

Houlahan and Tacka (1991a/b) use music examples drawn from folk songs and art music representing both instrumental and vocal music. Many of the melodies appear multiple times in transposition. Forty-one melodies occur twice (Vol. 1: pp. 26, 30-32, 50-56, 74-76, 82-85, 104-109; Vol. 2: pp. 16-17, 33-34, 54-55, 62-64, 66-68, 70-74, 80-82), fifteen appear three times (Vol. 1: pp. 31-32, 38-44, 50-56, 70, 74-76, 82-85, 104-109; Vol. 2: pp. 34-43, 58-60, 62-64, 80-82), four appear four times (Vol. 1: pp. 30-32, 38-44, 82-85, 104-109), one appears five times (Vol. 1: pp. 74-76), two appear seven times (Vol. 1: pp. 30-32; Vol. 2: pp. 16-17), and one appears ten times (Vol. 1: pp. 104-109). In those cases, the multiple transpositions of one pattern counted as one melody. Multiple transpositions of the same melody reveals a fixed-system approach, but their book uses relative movable *do* syllables throughout, which strongly favors relative movable *do*. The authors claim that all of the musical examples “are drawn from folk songs and art music encompassing a wide range of historical eras” (p. 1). However, only 92 out of 319 identify the composer, style, or name of the piece. At the beginning of each chapter, the authors present melodic patterns, which occur in the pieces. Houlahan and Tacka (1991a) write “Both melodic and rhythmic patterns were determined as being characteristic of American folk music” (p. 2). That statement could lead one to conclude that melodies using those patterns are of the folk repertoire. Since there is no certainty of

the patterns being of the folk repertoire, this study labeled them as composed by the authors. The vast majority, 71.2 percent, of the exercises are composed by the authors. If the melodies containing characteristics of American folk music are folk music, then there is a very high percentage of it, which implies a relative movable system bias. However, that cannot be determined with certainty. Therefore, there is no bias in this category.

Karpinski and Kram (2017) is an anthology consisting of all literature examples from both instrumental and vocal genres. Melodic excerpts were part of the calculations, but isolated rhythmic excerpts were not. Most melodies, 74.6 percent, are from the common-practice period; a smaller amount, 33.1 percent are from the nineteenth to twenty-first centuries, and few melodies, 7.7 percent, are folk songs. The book focuses on harmonic concepts with a section devoted to each chord. Greater amounts of common-practice period music plus emphasis on using functional context imply a parallel movable system bias.

Krueger (2017) consists of mostly literature pieces at 71.7 percent and exercises composed by the author at 28.3 percent. Melodic exercises were part of the calculations, but tonal patterns, melodic patterns, symbolic exercises, and isolated rhythms were not part of the calculations. The tonal and melodic patterns serve the purpose of learning patterns before they are put into context. This book contains 34.7 percent folk music, 33 percent common-practice music, and 12.8 percent nineteenth to twenty-first century music. There is a fairly high amount of folk and common-practice music and there is also an emphasis on functional hearing. Those percentages reveal a preference for a movable system without indicating a strong preference for relative or parallel approaches.

Levin and Martin (1988a) contain vocal and instrumental literature. The singing exercises consist of scales, tetrachords, intervals from tonic to other notes in the scale, arpeggios of triads, short tonal patterns, and literature exercises. Only the pieces from the literature were part of the calculations because the others are quite short in length (tonal

patterns) or they are standard patterns (scales, triads, and tetrachords), not composed exercises. There is a high percentage of Romantic period works at 44 percent. Over seventy percent of the excerpts are from the common-practice period and over fifty percent are from the Romantic era through the twenty-first century. There is emphasis on function through the recommendation of the authors to sing arpeggios of chords. In the Romantic era music through the twenty-first century, there is no indication of using movable systems. Those results indicate either a movable or fixed system preference.

Lloyd, Lloyd, and DeGaetani (1980) consist of drills and excerpts that are composed by the authors or from vocal or instrumental literature beginning with Medieval plainsong and progressing in chronological order to twentieth-century. The materials composed by the authors comprise 38.9 percent and music of the literature comprises 61.1 percent. Each time period is roughly equal to about 10 percent: Medieval is 4.8 percent, Renaissance 9.4 percent, Baroque 15 percent, Classical 8.5 percent, Romantic 9.8 percent, and twentieth and twenty-first centuries is 10.8 percent. The roughly equal division of excerpts reveals a preference for any system.

Murphy, Phillips, Marvin, and Clendinning (2016b) consist of melodies composed by the authors and literature excerpts from a wide variety of times periods. All pitched melodies were part of the calculations and isolated rhythmic exercises were not. Roughly, one-third of the music (32 percent) is composed by the authors, 36.6 percent is from the common-practice period, 10.75 percent is tonal pop music, and 27.3 percent is Romantic music and serious music of the twentieth and twenty-first centuries. A majority of the music is tonal, but it has a sizable portion of twentieth-century music. When tallying the percentages just considering literature excerpts, 40.1 percent is Romantic music and serious music from the twentieth to twenty-first centuries and 53.8 percent is common-practice music. If one includes pop music with the common-practice music category because pop music frequently is tonal, then the percentage total is 69.6 percent. Great amounts of nineteenth through twenty-first century music reveal literature

expected in fixed-system books if there is no recommendation of using movable syllables in that context. Murphy, Phillips, Marvin, and Clendenning (2016b) advise “For the following melodies, compare the use of solfège syllables, scale-degree numbers, and integers, and determine the most useful system for each melody. Regardless of the system that you choose, look for patterns such as scales, modes, and tetrachords to help orient your ear to unfamiliar music” (pp. 510-511). The authors recommend the use of a movable system for tonal music and they suggest a combination of movable and fixed methods for twentieth-century music. The literature in this textbook plus the authors’ recommendation of movable syllables reveals a movable preference.

Rogers and Ottman (2014) is an anthology consisting of vocal and instrumental literature excerpts, folk music, and melodies composed by Ottman himself. Most excerpts were part of the calculations, except for isolated rhythmic exercises and improvisations.²⁶ A large number of excerpts in their textbook are identified by a country name, which falls into the folk music category. There is a high percentage of folk music at 47.85 percent and a moderately high amount of common-practice music at 35.2 percent, but fewer nineteenth to twenty-first century music at 24.8 percent. The high amounts of folk and common-practice music suggest a movable system preference if it is accompanied by a focus on functional hearing. Rogers and Ottman use movable *do* syllables in their text. They recommend rapidly shifting the syllables when singing twentieth-century music (p. 375). The results reveal a preference for movable systems.

Stevenson and Porterfield (1986) contain interval and pitch pattern exercises, isolated rhythm practice, clef-reading practice, and melodies. Melodies and duets were part of the calculations, but intervallic exercises, pitch pattern exercises, isolated rhythm

²⁶ One of the excerpt dates was a mystery to locate. The author Nancy Rogers indicated that the piece by Jackson called *When a Woman* was from a text written around 1682. She thought that the music was probably from around the same time because she did not think a bawdy poem would be set much later than its own time (Nancy Rogers, e-mail message to author, January 8, 2019). Using that assumption, this study placed it in the late 1600s.

practice, and clef reading were not. The date of composition was not identifiable for all of the works. Twenty-four out of 407 were unidentifiable, which is 5.9 percent. Their book contains 10.3 percent music composed by the authors, 55.8 percent common-practice music, and 26.8 percent Romantic and twentieth to twenty-first century music. The results contain moderately high percentages of common-practice music, which suggests a movable or fixed preference (movable if accompanied by recommendation of functional hearing). In support of this movable-system preference is the following reason: the authors introduce modulation by harmonic topics, i.e. modulation to dominant and subdominant. However, the authors recommend singing chords (major, minor, diminished, and augmented) using numbers corresponding to root, third, and fifth, which is not a functional approach. There is additional evidence of fixed pedagogical methods: there are clef-reading exercises that emphasize pitch names. The repertoire reveals fixed and movable pedagogical methods.

Thomson (1981, 1975) contains interval exercises, practice exercises with pitch, rhythmic exercises, and melodies. Practice exercises and melodies were part of the calculations, but rhythmic and intervallic exercises were not. Twenty-eight out of 1109 excerpts were unidentifiable, which is 2.5 percent. It does not significantly affect the results. There are 23 percent pieces composed by the author, 18.7 percent folk songs, 36.2 percent common-practice music, and 33.2 percent Romantic and twentieth to twenty-first century music. When considering only literature excerpts, 47.1 percent are from the common-practice era and 43.1 percent are from the nineteenth to twenty-first centuries. Those are both relatively high, which reveals literature commonly expected in fixed or movable books (movable if accompanied by emphasis on functional hearing). The exercises in the book reveal both movable and fixed methods: earlier melodies are stepwise, leap among the tonic, and progress from small intervals to larger intervals. Leaps among the tonic triad are a functional movable approach. The use of tonality frames in Units 2 and 3 hint at a functional approach as well, but the clef-reading

exercises encourage fixed approaches. Characteristics of exercises in the book support the fixed and movable preferences revealed by the repertoire.

Table 6.18: Percentages of music composed by the authors and of various time periods

	Composed by the author(s)	Medieval	Renaissance	Baroque	Classical	Romantic	20 th , 21 st centuries	Pop	Anonymous	Folk
Adler	55.6%		3.2%	5.3%	5.6%	11.3%	9.95%	1.6%	0.7%	6.7%
Benjamin, Horvit, and Nelson	88%	0.29%	0.57%	3.2%	3.4%	2.6%	0.29%		0.14%	1.6%
Benward	40.1%	1.7%	0.8%	10.1%	9.5%	18.9%	4.6%		0.34%	13.9%
Benward, Carr, et al	21.8%	2.5%	1.0%	11.6%	17.9%	20.6%	13.5%	2.1%		9.1%
Berkowitz, et al	88.5%		0.09%	0.45%	2.6%	4.9%	2.6%			0.8%
Bland	100%									
Cole and Lewis	82.7%		0.4%	3.7%	2.6%	10.6%				
Cooper		20.6%	9.5%	11%	6.3%	12.2%	10.6%			30%
Damschroder	31%			5.3%	22.7%	41%				
Danhauser, Lemoine, Lavignac	2.27%			11.0%	28.1%	58.1%				0.59%
DeLone	4.3%	10%	11.1%	15.2%	13.9%	16.4%	9.3%	3.6%		16.1%
Henry	58.6%	1.3%	1%	5.5%	9.1%	13.1%	9.1%		0.77%	2.8%
Horacek and Levin	100%									
Houlahan and Tacka	71.2%	2.8%	2.5%	2.8%	7.8%	5.6%	0.6%		1.3%	5.3%
Karpinski and Kram		0.4%	3.2%	26%	28%	20.6%	12.5%	1.6%		7.7%
Krueger	28.3%	1.0%	1.6%	9.4%	11.8%	11.8%	1%		0.5%	34.7%
Levin and Martin		3%	5%	15%	14.3%	44%	10%			8.7%
Lloyd, Lloyd, DeGaetani	38.9%	4.8%	9.4%	15.0%	8.5%	9.8%	10.8%			2.9%
Murphy, Phillips, et al	32%	0.48%	2.2%	10.9%	10.6%	15.1%	12.2%	10.8%	0.4%	5.43%
Rogers and Ottman	6.2%	0.1%	1.6%	8.1%	11.1%	16%	8.8%		0.2%	47.9%
Stevenson & Porterfield	10.3%	1.7%	2.9%	19.7%	13%	23.1%	3.7%		9.1%	16.5%
Thomson	23.0%	1.5%	3.0%	9.6%	8.3%	18.3%	14.9%		2.7%	18.7%

Table 6.19: Percentages of various time periods excluding music composed by the authors

	Medieval	Renaissance	Baroque	Classical	Romantic	20 th and 21 st centuries	Pop	Anonymous	Folk	Common Practice	19 th - 21 st centuries
Adler		7.3%	12%	12.5%	25.5%	22.4%	3.6%	1.6%	15.1%	51%	47.9%
Benjamin, Horvit, and Nelson	2.4%	4.8%	26.2%	28.3%	21.7%	2.4%		1.1%	13%	76.2%	24.1%
Benward	2.9%	1.3%	17%	15.8%	31.6%	7.6%		0.57%	23.2%	64.4%	39.2%
Benward, Carr, et al	3.2%	1.3%	14.8%	22.8%	26.4%	17.2%	2.7%		11.6%	64%	43.6%
Berkowitz, et al		0.8%	4%	22.8%	43%	22.8%			7.1%	69.8%	65.8%
Bland	NA										
Cole and Lewis		2.3%	21.5%	14.9%	61.3%					97.7%	61.3%
Cooper	20.6%	9.5%	11%	6.3%	12.2%	10.6%			30%	29.5%	22.8%
Damschroder			7.7%	32.9%	59.4%					100%	59.4%
Danhauser, Lemoine, Lavignac			11.2%	28.7%	59.4%					99.3%	59.4%
DeLone	10.5%	11.6%	15.9%	14.5%	17.1%	9.7%	3.8%		16.9%	47.5%	26.8%
Henry	3.1%	2.5%	13.1%	21.3%	30%	21.3%		1.9%	6.9%	64.4%	51.3%
Horacek and Levin	NA										
Houlahan and Tacka	9.8%	8.7%	9.8%	27.2%	19.7%	2.2%		4.3%	18.5%	56.7%	21.9%
Karpinski and Kram	.4%	3.2%	26%	28%	20.6%	12.5%	1.6%		7.7%	74.6%	33.1%
Krueger	1.4%	2.2%	13.1%	16.4%	16.4%	1.4%		0.7%	48%	45.9%	17.8%
Levin and Martin	3%	5%	15%	14.3%	44%	10%			8.7%	73.3%	54%
Lloyd, Lloyd, DeGaetani	7.9%	15.4%	24.5%	13.9%	16%	17.7%			4.7%	54.4%	33.7%
Murphy, Phillips, et al	0.7%	3.2%	16%	15.6%	22.2%	17.9%	15.8%	0.5%	8%	53.8%	40.1%
Rogers and Ottman	0.1%	1.7%	8.6%	11.8%	17.1%	9.4%		0.2%	51%	37.5%	26.5%
Stevenson & Porterfield	1.9%	3.3%	21.9%	14.5%	25.8%	4.1%		10.1%	18.4%	62.2%	29.9%
Thomson	1.9%	3.9%	12.5%	10.8%	23.8%	19.3%		3.5%	24.3%	47.1%	43.1%

Table 6.20: Repertoire reveals the following biases

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				
Benjamin, Horvit, and Nelson				
Benward	X			X
Benward, Carr, et al	X			X
Berkowitz, et al				
Bland				
Cole and Lewis				
Cooper	X			X
Damschroder	X			X
Danhauser, Lemoine, Lavignac				X
DeLone	X			X
Henry				
Horacek and Lefkoff				
Houlahan and Tacka				
Karpinski and Kram		X		
Krueger	X			
Levin and Martin	X			X
Lloyd, Lloyd, DeGaetani	X			X
Murphy, Phillips, et al	X			
Rogers and Ottman	X			
Stevenson & Porterfield	X			X
Thomson	X			X

Five Questions

In addition to looking at the explicit features above, five questions will be examined in each book: (1) What are the goals of sight singing? (2) What instructions does the text provide with regard to a solmization system? (3) What instruction does the text give when teaching major? (4) What instruction does the text give when teaching minor? (5) What instruction does the text give when teaching twentieth-century idioms?

Question 1—What are the goals of sight singing?

According to Randel (2001) in the *New Harvard Dictionary of Music*, sight singing is “the ability to perform efficiently at sight [a piece of music on seeing it for the first time]” (p. 748). CPE Bach ([1759-97] 1949) finds that the goal of reading at sight is not limited to just playing the correct notes and rhythms of a passage, but also conveying the affect of a piece. He wrote “A mere technician [one who plays correct notes and rhythms without touching listeners emotional responses], however, can lay no claims to the rewards of those [performers who play correct notes, rhythms, and touch listeners feelings] who sway in gentle undulation the ear rather than the eye, the heart rather than the ear, and lead it where they will (p. 148).” Jones (1949) wrote “The person who hears mentally what he sees reads best” (p. 57). Benward (1989b) invokes “aural imagery” (p. ix). Benward Carr, Greer, McKee, and Torbert (2015) refer to the “hearing eye” (p. xi). Karpinski (2000a) suggests “auralizing²⁷” and Gordon (1993) advocates “audiation.²⁸” Overall, the goal according to these authors is to look at a piece of music and be able to hear it in one’s ear.

²⁷ Karpinski (2000a) uses the term “auralize” to mean “The process of hearing music in the absence of physical sound” (p. 49).

²⁸ Gordon (1993) uses the term “audiate” to mean “to hear and comprehend music for which the sound is no longer or may never have been physically present” (p. 13).

How does one achieve this important goal of music—being able to picture the music mentally without an instrument? Schenker ([1935] 1979) wrote “Only by the patient development of a truly perceptive ear can one grow to understand the meaning of what the masters learned and experienced” (p. xxii). His next quote offers additional insight. Schenker ([1935] 1979) wrote

The *performance* of a musical work of art can be based only upon a perception of that work’s organic coherence. Interpretation cannot be acquired through gymnastics or dancing; one can transcend “motive,” “theme,” “phrase,” and “bar line” and achieve true musical punctuation only by comprehending the background, middle ground, and foreground. As punctuation in speech transcends syllables and words, so true punctuation in music strives toward more distant goals....The player who is aware of the coherence of a work will find interpretative means which allow the coherence to be heard. He performs in this way will take care not to destroy the linear progressions” (p. 8).

To summarize, it is important to understand the structural goals of a work and the paths to arriving at those goals. Likewise, Saltzer (1962) recommends structural hearing. Klonoski (1998) recommends that students “internalize pitches and pitch relationships” (p. 81). Rogers (2004) suggests studying musical patterns (p. 100). Jersild (1966) recommended “learning to recognize at a glance entire musical patterns rather than laboriously going from detail to detail” (p. 6). However, Adler (1997) recommends focusing on intervals; he wrote “the ability to sing all intervals within any musical context, tonal or nontonal, is the goal of this text” (p. xi). Miller (1930) wrote “Most of them [using fixed *do*] read by intervals, by chord feeling, and by an acquired knowledge of the different pitches on the staff” (p. 18).

Many instructors favoring movable methods focus on functional hearing and scale-degree tendencies. That does not mean that fixed system books ignore this concept. Rogers (1996) indicates “The real goal of tonal sight-singing is not just accuracy; it is to hear the music in a particular way—a way that is musically nuanced, that is shaped and directed by goals and a way that respects the encoded tensions and internal-movement

proclivities of the specific environment. The job of sightsinging is context sensitivity and the enculturation of tonal bearings” (p. 149). Movable-*do* advocate, Karpinski (2000a), encourages a functional system of movable *do* using *do*-based minor. He identifies beginning with the major scale, followed by sequential patterns, half and whole steps, and tonic and dominant chords (pp. 148-153). In sight singing, movable system instructors tend to emphasize tonal patterns and/or diatonic intervals to help students with internalizing the pitch relationships.

Many instructors favoring fixed methods identify at least one of the following as a goal: music reading and recognition of intervals. Some fixed-system books use scale-degree numbers as an additional tool to help with functional listening. Rogers (2000) writes “the benefit or advantage or purpose of fixed *do* is to improve or teach music reading” (p. 16). Telesco (1991) notes “fixed *do* can work toward improving reading skills” (p. 181). Karpinski (2000a) states “fixed-*do* instruction would focus more closely on such skills as pitch reading, clefs, and transposition” (p. 147). As cited earlier, Blum (1968) wrote “The teacher who subscribes to the fixed solmization usually concentrates on teaching the sound and look on the staff of separate intervals. In order to carry this approach to its logical conclusions, the intervals must be presented in non-tonal as well as tonal settings” (p. 90). Therefore, instructors who list hearing by intervals as a goal will only receive labeling as a fixed-system book if they introduce both chromatic and diatonic pitches when they introduce intervals.

In summary, students can use tonal patterns and/or intervals to help them with internalizing the pitch relationships. Movable system instructors tend to emphasize tonal patterns. Some movable system instructors emphasize diatonic intervals as well whereas fixed system instructors emphasize diatonic intervals and possibly non-diatonic pitches. Many instructors favoring movable methods focus on functional hearing as a primary

goal, whereas many instructors favoring fixed methods identify at least one of the following as a goal: note-name reading, absolute pitch²⁹, and recognition of intervals.

Some of the textbooks whose stated goals align with the goals of movable methods are the following: Karpinski and Kram (2017) indicate that the goal is to produce “correct pitches and rhythms with musicality” (p. xiv). How is this goal achieved? In his *Manual*, Karpinski (2017) describes methods used in his book. He writes “A good deal of persuasive research has demonstrated the importance of tonally functional thinking, specifically in terms of scale degrees and their characteristic functions, so the methods and organization of pitch materials in this book have been directly affected by scale-degree thinking” (xiii). Houlahan and Tacka (1991) describe the goal of their text as “developing a variety of skills including sight-reading, dictation, musical memory, rhythmic reading, formal analysis, part singing, and improvisation” (p. 1). They teach musical memory by teaching various pitch patterns, which is a method commonly found in movable-system books. Bland (1984) writes that the goal is to improve “musical performance and listening skills” (p. v). He accomplishes this by involving a “functional analysis for singing melodies at sight” (v). In the foreword of Henry, Rogers (1997) writes “The goal, again, is to produce a listener who can hear musical patterns” (p. xiii). Murphy, Phillips, Marvin, and Clendinning (2016b) write “This sight-singing volume emphasizes the skills required for real-time performance” (p. vii). The next paragraph suggests what these skills are. Students need “to understand common musical patterns” (vii). All of the books listed in this paragraph emphasize functional analysis and/or pattern recognition when identifying the goals for their respective textbook.

²⁹ Research shows that absolute pitch can not be learned as an adult: Levitin and Rogers (2005), Miyazaki and Ogawa (2006), and Trainor (2005) conclude that early music exposure during a critical period is necessary to develop absolute pitch. However, some fixed-system books indicate absolute pitch as a goal.

The following textbooks align with goals of fixed-system books: Adler (1997) writes “the ability to sing all intervals within any musical context, tonal or nontonal, is the goal of this text” (p. xi). Stevenson and Porterfield (1986) write “*Rhythm and Pitch: An Integrated Approach to Sightsinging* represents an attempt by the authors to formulate a reading text that incorporates a gradual increase in difficulty in both pitch and rhythm study” (p. v). They mention formulating a “reading text” in their description. They emphasize clef-reading by including it in each unit and instructing students to sing the clef-reading exercises on letter names. These texts emphasize non-diatonic and diatonic intervals or note-name reading.

The next group of textbooks expresses goals that align with both fixed- and movable-system books, thereby not indicating a preference. Benward, Carr, Greer, McKee, and Torbert (2015) write that “‘Hearing music’ with one’s ‘eyes’ has served as the purpose of this book since its first edition in 1965” (p. xi). Benward (1989b) describes the goal as developing the “hearing eye” and “seeing ear” or developing “aural imagery” (p. ix). Berkowitz, Fontrier, Kraft, Goldstein, Smaldone (2017) write that “For a musician, the ability to ‘hear’ music without playing it is an invaluable tool.... The ultimate goal of a sight singing curriculum is to develop skills and confidence in ‘hearing’ notation and reproducing that notation through singing” (p. 4). Krueger (2017) writes “the ultimate goal of an aural skills curriculum is to produce a musician who can look at a musical score and hear it in his or her mind without playing it or singing it out loud” (p. xv). Rogers and Ottman (2014) write “Developing the ‘mind’s ear’—the ability to imagine how music sounds without first playing it on an instrument—is essential to any musician, and sight singing...is invaluable in reaching this fundamental goal” (p. x). Cole and Lewis (1909) write “*Melodia* undertakes to prepare students to meet the most difficult tasks in pitch and rhythm set by masters of choral composition” (p. vi). Danhauser, Lemoine, and Lavignac (1923) write that the goal is to “familiarise the pupil with the notes so as to avoid giving him two difficulties to overcome at once—the length

and pitch of notes” (Vol. 1A, p. 1). They focus on accurate rhythms and pitches. Similarly, Lloyd, Lloyd, and DeGaetani (1980) write “The emphasis throughout is as much on how to make the examples sound correct stylistically as it is on how to make them sound tonally and rhythmically perfect” (p. viii). Again, the emphasis is on pitch and rhythm, but with the addition of style. Levin and Martin (1988b) write “The instructor should always remember that the main purpose of sightsinging is to train the ear” (p. 10). In Volume I, Horacek and Lefkoff (1989) write “The purpose of the sightsinging lessons is to develop the ability to sing melodies from the printed page at sight” (p. 139). Cooper (1981) writes “The primary goals of this collection are to familiarize the student with the great folk and art music literature and to provide a framework for improving musicianship, particularly in the areas of rhythmic accuracy and pitch discernment” (xxi). Knowledge of literature and accuracy of rhythms and pitches are goals of both movable- and fixed-system instructors. Damschroder (1995) writes “‘Sight-singing’ (learning to Sing) requires considerable practice. It focuses on strategies that develop your ability to read music notation accurately and with insight. These skills will enhance your enjoyment of music and your success in performing it” (p. ix). Reading music notation accurately is a goal of all music instructors. His description does not strongly identify a bias toward one system. These are all goals of sight-singing books subscribing to either fixed or movable methods.

One textbook does not clearly fit into one of the categories: DeLone (1981) writes “The goals of sight-reading are to get to know a piece, to test our ability to hear what we see with our mind’s ear, and to give a good impression of the contours, rhythms, pace, and general style of a passage” (p. 3). Hearing with the mind’s ear is a goal of both movable and fixed systems. However, a good impression of contours is not a goal of fixed or movable systems.

Some books use “revealing terminology” words that are common to proponents of either fixed or movable *do*, which hint at a bias. Benjamin, Horvit, and Nelson (2003)

write “The ability to read accurately and fluently at sight is essential to your musicianship; the competent musician must be able to translate symbol into sound with speed and precision” (p. xii). The terminology “symbol into sound” is common among Kodály proponents such as Houlihan and Tacka suggesting a relative movable system preference. In support of this relative movable system preference is the authors list relative minor as the standard option for minor syllables and parallel minor syllables as an alternative option. Similarly, Thomson (1981) writes “A fundamental requirement for musicianship is the ability to translate the symbols of music notation into the sounds the composer intended—the ability to read music” (p. viii). In addition to using the terminology “symbol into sound,” he also focuses on music reading. Thomson’s book uses words commonly found in movable and fixed system books. Table 6.21 shows the results of assessing biases in the goals of the textbooks. Note that many of the textbooks identify goals that associate with both fixed and movable systems. The goal of preparing students to sing all music is the same between the solmization systems, but the methods to achieve that objective are different between them. Perhaps textbook authors list similar goals because few books are willing to stake a claim of preference for one solmization method over the other.

Table 6.21: Goals of textbooks reveal biases toward which solmization systems

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				X
Benjamin, Horvit, and Nelson			X	
Benward	X			X
Benward, Carr, et al	X			X
Berkowitz, et al	X			X
Bland	X			
Cole and Lewis	X			X
Cooper	X			X
Damschroder	X			X
Danhauser, Lemoine, Lavignac	X			X
DeLone				
Henry	X			
Horacek and Lefkoff	X			X
Houlahan and Tacka	X			
Karpinski and Kram	X			
Krueger	X			X
Levin and Martin	X			X
Lloyd, Lloyd, DeGaetani	X			X
Murphy, Phillips, et al	X			
Rogers and Ottman	X			X
Stevenson & Porterfield				X
Thomson	X			X

Question 2—What instructions does the text provide with regard to a solmization system?

Many textbooks claim neutrality concerning solmization systems. However, biases appear when the author(s) suggest which method(s) to use for specific types of music and in the descriptions of the solmization systems. In this category, there is a focus on the solmization instructions for singing music prior to the twentieth-century because a later question covers instructions for singing twentieth-century music. Larson (1993b) writes that parallel movable *do* vivifies scale-degree function (p. 115). Relative movable system users often follow Kodály's method, e.g. Houlahan and Tacka (1991a) write that they follow the method of Kodály (p.2). His method primarily uses relative movable-*do* solmization with the addition of German style of letter names, scale-degree numbers, and hand signs. Rogers and Ottman (2014) note that fixed systems encourage absolute pitch, clef-reading, and singing all music (p. 410). When assessing a bias in the descriptions, parallel movable system books will emphasize scale-degree function; relative movable system books will encourage the use of relative movable syllables, letter names, and scale-degree number; and fixed system biases will emphasize absolute pitch, fixed system syllables, and non-diatonic and diatonic intervals.

Some of the descriptions do more than imply a bias; they state their bias. Books that do so include Karpinski (2017); Murphy, Phillips, Marvin, and Clendinning (2016b); Henry (1997); Krueger (2017); and Houlahan and Tacka (1991a). Karpinski (2017) writes "For the most part, the book uses a parallel, functional approach to movable *do* (including do-based minor)" (p. xviii). Murphy, Phillips, Marvin, and Clendinning (2016b) write

All singing systems have merit and choosing some system is far superior to using none. To reinforce musical patterns, we recommend singing with movable-*do* solfège syllables and/or scale-degree numbers, but we provide a summary explanation of both the movable- and the fixed-*do* systems in Chapter 1 to help students get started....For solfège in modal contexts, we present two systems in Chapter 5, one using syllables derived from major and minor, and one using relative (rotated) syllables (p. xi).

They use parallel movable syllables when introducing minor, but both parallel and relative movable syllables when introducing modes. Overall, they prefer a movable system. In the foreword written by Rogers in Henry (1997), Rogers first defines various solmization systems and indicates for what type of literature each system works best. Rogers (1997) states that “most teachers will favor a combination of approaches” (p. xix). The approach sounds neutral so far. Then, he claims that “[movable *do* with *do*-based minor] is currently in greatest use nationally at the college level and is believed by many leading authorities to best project the internal relationships found in tonal music” (p. xviii). The foreword of a text usually concurs with the opinions of the author of a text. Therefore, the instructions regarding solmization systems used in Henry’s text suggests a parallel movable bias. Henry uses scale-degree numbers in his text, which supports a movable preference (not indicating relative or parallel). After claiming that any solmization system works with her textbook, Krueger (2017) writes “Any tonal system can be used successfully if that system is used consistently and incorporates the music literacy pedagogy presented in this book” (p. xvi). The following statement reveals her solmization preference: “*La*-minor allows inexperienced singers to sing in tonalities³⁰ other than the major without knowledge of chromatic syllables, notation, or music theory” (p. 638). Following that, Krueger cites Bluestine (2000)³¹ claiming that movable *do* with *la*-based minor is the “only tonal syllable system based on syntax” (p. 118). Krueger prefers *la*-based minor. Houlahan and Tacka (1991a) write that “The wide range of styles in the examples make them [these books] entirely suitable for use with any sight-singing system, including numbers and letter names as well as solfa syllables” (p. 2). They identify numbers, letter names, and solfa syllables as possible systems to use.

³⁰ Krueger uses Edwin Gordon’s (1993) definition of tonality where “tonality refers only to what is usually called mode” (p. 83).

³¹ Krueger erroneously cites Bluestine as (1964, 92), but the publication date of the first edition was 1995. The correct citation is Bluestine (1995, 92). The second edition is Bluestine (2000, 118).

These options cover both movable and fixed systems. Similarly, Kodály³² instructors encourage the use of numbers, letter names, and relative movable-*do* syllables. Even though solfa syllables refer to either movable or fixed systems, Houlahan and Tacka's repertoire and use of relative movable syllables in the body of the text strongly favors a relative movable system.

Some descriptions claim that movable *do* works well for tonal music, but not for highly chromatic and much twentieth-century music. They often prefer movable methods for tonal music, but fixed methods for chromatic and post-tonal music. Benjamin, Horvit, and Nelson (2013) write that "In singing pitched material, it is possible to use a variety of methods: fixed or movable *do*, numbers, or a neutral syllable, such as *la*. Tonally oriented systems, such as movable *do* and numbers, work very well in primarily diatonic contexts; however, they lose their efficacy in highly modulatory materials and most twentieth-century idioms" (p. vi). They appear neutral at first, but then they subtly identify movable methods as working well in tonal music, but not for highly chromatic music. That leaves fixed methods and neutral syllables for highly chromatic and twentieth-century music suggesting preferences of movable systems for tonal music and fixed systems or neutral syllables for later music. Within the movable category, they prefer *la*-based minor to *do*-based minor because they identify *la*-based minor as the standard option and *do*-based minor as alternative syllables. Benward, Carr, Greer, McKee, and Torbert (2015) describe movable *do* (*do*-based and *la*-based minor), scale-degree numbers, and fixed systems (inflected and uninflected fixed *do* and mod-twelve integer numbers). In their book, they write "Part D of Units 1-14 are made up entirely of tonal melodies, lending themselves quite appropriately to solfeggio, or number systems.

³² Zoltan Kodály invented the Kodály method in order to teach music literacy to Hungarian children. His method primarily used relative movable *do* solmization. He also incorporated other systems such as the German style of letter names to aid in reading of all clefs and hand signs. The German style of letter names is a fixed system. In the German style, the pitches in a C-natural scale are C-D-E-F-G-A-B-C, the pitches in a C# scale are Cis-Dis-Ees-Fis-Gis-Ais-Bis-Cis, and the pitches in a C-flat scale are Ces-Des-Es-Fes-Ges-As-Bes-Ces.

Because the materials in Units 15 and 16 are more contemporary, systems such as neutral syllable, chromatic fixed-*do*, or integers 0-11 are more appropriate” (p. xiii). Even though the word “solfeccio” usually refers to fixed *do*, given the context it refers to movable systems. Their description reveals a preference for movable methods for tonal music and fixed systems or neutral syllable for post-tonal music.

Other books also contain characteristics commonly found in movable and fixed system books. Benward (1989a/b) recommends learning whatever system the instructor prefers. However, he writes “To take the guesswork out of sightsinging and ear training it is imperative that you ‘know’ the scale degree of all melody notes and communicate that information to your instructor, as well as to yourself” (p. ix). That stresses functional listening, which is a goal of movable systems. He also states that students should know intervals (and uses both chromatic and diatonic intervals in Chapter 3), which is a goal of fixed systems. Horacek and Lefkoff (1989) write about the various solmization systems recommending multiple methods—one for pitch naming and another for scale-degrees (Vol. 1, p. 4; Vol. 2, pp. 179-180). They recommend the neutral syllable *la* when singing from chord symbols and any system when singing arpeggios of harmonic progressions (Vol. 2, p. 183).

The following textbooks contain descriptions that imply biases towards fixed systems. Adler (1997) writes “I remain neutral as to the adoption of any specific method of sight singing. While I think the ‘fixed *do*’ system may be more easily applied to nontonal or modulatory material, ways can be found to use the ‘movable *do*’ method for the same material, simply with certain modifications” (p. xv). The words—the fixed *do* system may be more easily applied—suggest a fixed-system preference. Danhauser, Lemoine, and Lavignac (1910-1913) do not include instructions for using syllables, but they write a few fixed syllables in their textbook, especially when introducing new clefs. Books intended for audiences speaking a Romance language will naturally use fixed syllables as pitch and key names. There is other evidence in addition to the syllables that

offers evidence of a fixed bias. As shown previously, earlier melodies are in the key of C, they are stepwise and outline specific intervals, and the book's organization is not by harmonic context.

The following textbooks contain descriptions that imply a bias toward neutral syllables or fixed systems. Cooper (1981) suggests that students majoring in voice, conducting, music history, or music theory should use original text for vocal pieces, whereas other students should use the method(s) preferred by their instructors (p. xix). All of his excerpts are vocal ones, so instructors following his recommendation do not need a different system for non-vocal melodies because they do not occur in his book. Instructors desiring instrumental excerpts need to add supplemental exercises of such works. On p. 4 of his text, Cooper refers to C-clef and bass clef as *do*-clef and *fa*-clef, which suggests a fixed system preference. DeLone (1981) begins by claiming his book advocates no single system throughout it. He recommends using neutral syllables when singing folk music in Unit one, fixed *do* for passages from plainchant through Monteverdi, solfège for diatonic music, and not using scale-degree numbers for highly modulatory music (p. 2). Solfège traditionally refers to fixed syllables, but some musicians use the term, solfège, to refer to movable syllables. In order to determine his use, let us look where diatonic music occurs in his book. DeLone recommends using neutral syllables on p. 160 where melodies from the seventeenth-, eighteenth-, and nineteenth-century excerpts occur. Overall, DeLone favors a neutral-syllable or fixed-system approach. Stevenson and Porterfield (1986) recommend using neutral syllables for interval exercises, letter names for clef-reading exercises, and singing on various syllables for melodies. Even though they suggest using various systems, they write that “when a familiarity with the sounds of the scales is attained, however, singing on a neutral syllable or pitch names is encouraged” (p. 77). These descriptions indicate a fixed or neutral system preference. Thomson (1981) recommends singing on a neutral syllable, but indicates that some prefer using a movable system such as scale-degree

numbers or movable *do* at first. He thinks that “since both of these symbolic systems are crutches, however, and not germane to the reading of music, they should be discarded as soon as the reader has developed recall for any given pitch system. Therefore, only neutral syllables (such as *la*) are recommended” (p. ix).

Some books try to remain neutral and claim that students should learn multiple systems, thereby indicating no bias. In Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017), they describe the solmization systems of movable *do* (*do*-based minor only), scale-degree numbers, fixed *do*, and neutral syllables. They suggest that students ought to know multiple systems stating that “A musician is expected to know the system in common use wherever he or she may be; therefore, the student should master more than one of these techniques” (p. 2). Shortly before that citation, the authors mention that certain countries use fixed *do* and that several methods are in common use in the United States. Therefore, the “system in common use” refers to the system used by the country or school where one teaches. This implies that in the future, students will study or teach at a school that uses a different solmization system than their preferred method. The authors do not say whether that meant learning both movable- and fixed-*do* systems, which could cause confusion because of using the same syllables for different meanings or if it meant learning a movable and a fixed system whose syllables are different. Lloyd, Lloyd, and DeGaetani (1986) claim “that any system can produce results—if the student practices diligently” (p. viii). Rogers and Ottman (2014) identify the strengths of each system: parallel movable systems work best in common-practice tonal music, relative movable systems work best for modal music and some folk music, and fixed systems work equally well in all music (pp. 409-410). They do not indicate a favored system in their descriptions. Levin and Martin (1988b) write about fixed and movable systems concluding that “each system provides precisely the benefit that the other lacks” (p. 9). They claim that “the methods employed by the text are not dependent upon any of these approaches; they will work equally effectively regardless of the instructor’s decision” (p.

9). Damschroder (1995) writes that students should only read the instructions for the solmization system they are using (p. ix). He provides instructions for the common methods not indicating a preference.

Cole and Lewis (1909) and Bland (1984) do not list instructions regarding solmization systems. Table 6.22 reveals the biases observed in the instructions given for solmization systems.

Table 6.22: Instructions given for solmization systems reveal bias for which system(s)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				X
Benjamin, Horvit, and Nelson			X	
Benward	X			X
Benward, Carr, et al	X			
Berkowitz, et al				
Bland				
Cole and Lewis				
Cooper				X
Damschroder				
Danhauser, Lemoine, Lavignac				X
DeLone				X
Henry	X			
Horacek and Lefkoff	X			X
Houlahan and Tacka			X	
Karpinski and Kram		X		
Krueger			X	
Levin and Martin				
Lloyd, Lloyd, DeGaetani				
Murphy, Phillips, et al	X			
Rogers and Ottman				
Stevenson & Porterfield				X
Thomson				

Question 3—What instruction does the text give when teaching major mode?

The next question involves the instructions and practice tips given when teaching the major mode. For movable systems, functional relationships such as tonal patterns and the tonic chord receive emphasis, whereas for fixed systems, pitch-name reading and absolute pitch receive emphasis. Fixed-system users often use intervallic, functional, or implicit approaches among others. Books that list the syllables in the instructions state their bias. Movable *do* proponent Karpinski (2000a) recommends using major scales, tonal patterns, and sequentials. Fixed *do* proponent Wilhem (1839) shows the interval sizes of pitches in a major scale and recommends singing on fixed syllables. Hullah ([1842] 1983) recommends striking a tuning fork in order to find the pitch C, shows interval sizes of a major scale on a ladder, and instructs students to sing a C major scale using scale-degree numbers (p. 4). Multer (1978) identifies use of a tuning fork to remember a fixed pitch as a pedagogical method of fixed-system instructors (p. 33). Scale-degree numbers is a movable method, but fixed instructors can use functional approaches.

Books that encourage movable system habits are the following: Benjamin, Horvit, and Nelson (2013) write “Train yourself to recognize melodic patterns, such as scale fragments, chord arpeggiations, repetitions, sequences, cadential formulas, and so on. It is both easier and more musical to perform patterns than to merely move from note to note” (p. xiv). Benward, Carr, Greer, McKee, and Torbert (2015) recommend singing a vocalise (a vocal exercise) to establish key, using syllables or numbers to sing melodies, and remembering the notes of the tonic triad as reference pitches (p. 11). Benward (1989b) instructs students to sing a scale matching the key of the melody and to sing the melody using syllables or numbers. He suggests to circle $\hat{1}$, $\hat{3}$, and $\hat{5}$ if students have difficulty with pitch (p. 3). The latter suggestion focuses on functional listening. Murphy, Phillips, Marvin, and Clendinning (2016b) recommend using solfège syllables, scale-degree numbers, and letter names in Chapter one (p. 2), which includes both fixed

and movable methods. In Chapter 2, they apply “identical solfège syllables and scale-degree numbers to transpositions of a melody,” which emphasizes using movable methods of syllables and numbers (p. 9). Rogers and Ottman (2014) describe the various systems and instructions for looking at a melody, but do not indicate a solmization system preference. They list movable-*do* syllables and scale-degree numbers under the notes of excerpt 2.16, which suggests a movable system preference. Damschroder (1995) emphasizes movable methods when instructing students on how to sing. The focus is on maintaining notes of the tonic triad in mind rather than intervals when singing. He writes

Perform a C at the piano before you sing the melody...Even though this melody emphasizes stepwise motion, you should think beyond the individual steps and focus on what they combine to form...By keeping the pitches C, E, and G in mind (if necessary by performing all three pitches instead of only the starting pitch, C, at the piano before you begin), you will have less difficulty performing the passing notes and sensing how they connect the triadic pitches (4).

Houlahan and Tacka (1991a) recommend singing with syllables, conducting, and using hand signs (p. 5). They use movable-*do* syllables in their text. Karpinski (2017) provides instructions for using movable *do* and scale-degree numbers when introducing major scales (p. 8). Likewise, Krueger (2017) instructs students to sing pentachord melodies using movable *do* or scale-degree numbers (p. 201). Bland (1984) does not list solmization systems, but he gives a description for singing melodies. He finds that learning the tonic triad is more useful than learning intervals. He states “Since an awareness of underlying harmonic outlines provides an indispensable background for reading tonal melodies, the tonic triad outline, rather than the individual intervals, will serve as the basic structural unit on which to build skill in sight singing” (p. 48). That aligns with movable system goals. Thomson (1981) makes it clear that he does not follow fixed system goals when he writes “it is not really necessary to use an absolute pitch reference, except when persons with absolute pitch recall would be discomforted” (p. viii-ix). Prior to each melody, he shows a “tonality frame,” which shows the span of structurally important notes in a melody. Before singing each melody, he recommends to

“play and sing the tonality frame” for pitch orientation (p. 24). That suggests a movable system preference.

The following textbooks indicate a fixed bias. Adler (1997) recommends to “think about each interval as you sing it; do not take your knowledge of these intervallic relationships for granted” (p. 23). These intervals are non-diatonic and diatonic. Danhauser, Lemoine, and Lavignac (1923) write “these exercises are written to familiarise the pupil with the notes so as to avoid giving him two difficulties to overcome at once—the length and pitch of notes” (Vol. 1A, p. 1). The first exercise is a scalar exercise starting with a whole note on *C/do* sung four times, then whole notes on *C/do* and *D/re* sung four times, followed by whole notes on *C/do*, *D/re*, and *E/mi* sung four times, and so forth until it covers a whole scale. The focus is on absolute pitch. When teaching scalar patterns in major and minor, DeLone (1981) instructs students to “Sound the tonic and relate the beginning and ending degrees to the tonic before singing. Intone on fixed *do* or *la*” (p. 391). On the previous page, he lists scale-degree numbers to sing scalar patterns. His words—intone on fixed *do* or *la*—show a fixed- or neutral-system preference. The addition of scale-degree numbers strengthens students’ functional listening skills, which are not explicitly taught in fixed systems. Lloyd, Lloyd, and DeGaetani (1980) instruct students to sing “using conventional syllables or chordal function of each tone: root, third, fifth, and seventh” (p. 113). A good question is: what do they mean by “conventional syllables?” They offer clues in other places in their book: They instruct students a few pages earlier to “sing using letter names” (p. 110). A few pages later they instruct students to “sing using a neutral syllable” (p. 119). When they suggest using a chordal function approach, they suggest using the numbers one, three, and five to refer to root, third and fifth (p. 111). At another place in their book, they recommend scale-degree numbers (p. 9). Using these latter two systems requires that the same name be used for different functions. For example, one sings a root position diminished leading-tone triad as one, three, and five using the chordal function approach.

Using scale-degree numbers, that is $\hat{7}$, $\hat{2}$, and $\hat{4}$. That could cause confusion for movable-system users. Their book emphasizes either a neutral-syllable or fixed-syllable approach with the addition of numbers for chordal function or representing scale-degree number. Levin and Martin (1988a) recommend that students use syllables, letter names, and scale-degree numbers when singing melodies (p. 8). They suggest that students should use a tuning fork hoping that students will learn to memorize the sound of A440. When singing a melody, they suggest that students sing an A, sing from A to the tonic, sing the scale and tonic of the piece, and sing the melody (p. 8). The suggestion of remembering A440 is a teaching method of fixed system instructors³³. Cooper (1981) suggests using a variety of solmization systems, not strongly suggesting one. He instructs students to establish pitch from a pitch pipe or keyboard, establish the pulse, and sing on syllables without stopping (pp. 1-2). On p. 4 of his text, Cooper refers to C-clef and bass clef as *do*-clef and *fa*-clef and he refers to the pitch C as *do* and to the pitch F as *fa*, which suggests a fixed system preference.

The following do not indicate a bias. Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) write “Singing some definite syllable for every note allows the singer to control quality and intonation” (p. 1). Stevenson and Porterfield (1986) instruct students to “sing on neutral syllables, then with scale-degree numbers, solfeggio syllables, and finally with pitch names” (p. 7). There is a combination of neutral, fixed, and movable systems in that list, thereby not revealing a preference. Henry (1997) instructs students to “play the first pitch on the piano or another instrument, then use a syllable recommended by your instructor to match the pitch in a convenient octave. Name each pitch as you sing it” (p. 17). Horacek and Lefkoff (1989) instruct students to “Work at the piano, but use it primarily to verify what you have sung, not for rote study. In preparing for

³³ As cited earlier in this chapter, Multer (1978) identifies a method of teaching fixed *do*: “In a typical classroom approach, the student might be told on the first day to buy an A-440 tuning fork and to learn ‘*la*’” (p. 33) in hopes of developing absolute pitch.

performance, it can be helpful to practice certain parts or aspects separately, for example, difficult portions, connection of parts, pitches alone, rhythm alone, or recitation of solmization” (p. 3). There is no bias in their description. Cole and Lewis (1909) provide no instructions. Table 6.23 reveals the biases observed in the instructions given for singing major melodies.

Table 6.23: Instructions for singing major mode melodies indicate the following biases

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				X
Benjamin, Horvit, and Nelson	X			
Benward	X			
Benward, Carr, et al	X			
Berkowitz, et al				
Bland	X			
Cole and Lewis				
Cooper				X
Damschroder	X			
Danhauser, Lemoine, Lavignac				X
DeLone				X
Henry				
Horacek and Lefkoff				
Houlahan and Tacka	X			
Karpinski and Kram	X			
Krueger	X			
Levin and Martin				X
Lloyd, Lloyd, DeGaetani				X
Murphy, Phillips, et al	X			
Rogers and Ottman	X			
Stevenson & Porterfield				
Thomson	X			

Question 4—What instruction does the text give when teaching minor mode?

This question involves the instructions given when teaching minor mode. For movable systems, functional relationships such as tonal patterns and tonic chord receive emphasis, whereas for fixed systems, pitch-name reading and absolute pitch receive emphasis. Approaches associated with fixed-system textbooks are intervallic, functional, or intuitive methods among others. Within the movable systems, *do*-based minor emphasizes function and parallel relationships and *la*-based minor emphasizes hearing *la* as tonic. If the book identifies syllables to use when teaching minor, that indicates a preference.

The fixed-system books used as models in the previous chapter will offer insight into how minor mode occurs in fixed-system books. Hullah ([1842] 1983) describes the intervals in a minor scale, compares a C major scale to its parallel and relative minors (C minor and A minor), and recommends singing exercises by rote on fixed-*do* syllables. Identifying specific syllables to use declares one's bias. Wilhem (1839) describes the intervals in minor mode, presents examples of parallel and relative relationships to C major (C minor and A minor), includes exercises that are transpositions of the same melodic patterns in different key signatures (pp. 177-186), and presents minor key signatures in a systematic order: A minor, D minor, E minor, B minor, and G minor. Multiple transpositions of the same melodic pattern reflect a fixed-system approach and the systematic order of minor keys is common in fixed-system books. Overall in some fixed system books, the minor keys occur in a systematic order, the same melody occurs in multiple transpositions, and the author(s) recommend singing on fixed-*do* syllables.

The following indicate a movable bias: Benjamin, Horvit, and Nelson (2013) recommend using movable syllables *do* or *la* for tonic in minor (p. 69). Krueger (2017) lists numbers, *do*-based minor syllables, and *la*-based minor syllables. These books show a movable preference, but do not indicate a preference for a parallel or relative movable

system. The following indicates a relative movable bias: Houlahan and Tacka (1991) write *la*-based minor solmization syllables on the page introducing minor mode (p. 83).

The following indicate a parallel movable bias: Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) recommend that movable-*do* users use *me*, *le*, and *te* for minor mode melodies (p. 11). Murphy, Phillips, Marvin, and Clendinning (2016b) introduce minor with *do*-based minor syllables and with scale-degree numbers (p. 49). Karpinski (2017) describes both *la*-based minor and *do*-based minor solmization. His preference for *do*-based minor is evident in his description of *do*-based minor. He writes “Parallel keys share the same tonic and other scale-degree functions, so you can label the tonic $\hat{1}/do$ in both parallel major and minor keys. In this way, many of the same functions carry the same labels” (p. 83). When providing instruction in minor, Benward, Carr, Greer, Mckee, and Torbert (2015) write “For the moment, do not worry about the intervals formed by scale steps 1, 3, and 5. Think of these primarily as reference tones—tones from which other scale degrees may be located” (p. 46). This indicates functional thinking with the focus on scale degrees as opposed to intervals. Similarly, Benward (1989b) writes “First, sing the scale related to each exercise—as usual, with syllables or numbers. Then, sing each melody with the same syllables or numbers. For the moment, do not worry about the intervals formed by scale steps 1, 3, or 5. Think of these primarily as reference tones” (p. 22). Stevenson and Porterfield (1986) recommend using scale-degree numbers when singing pitch exercises in minor (p. 77). Bland (1984) describes tonal tendencies and structural goals of tonic and dominant (p. 155). His harmonic focus implies a functional approach of movable systems. Likewise, Henry (1997) describes melodic attractions in minor focusing on the attractions to pitches of the tonic triad. He notes that “the first and fifth scale degrees, in fact, are identical in major and minor” (p. 102). This suggests a parallel movable system approach. Rogers and Ottman (2014) indicate that “Most people who use movable solfège consistently designate the tonic as *do* in both major and minor keys. However, others follow the

earlier practice of designating the tonic as *la* in minor keys” (p. 64). On the following two pages, they include melodies listing *do*-based minor syllables and scale-degree numbers. That suggests a parallel movable system.

Some texts reveal a fixed bias. Adler (1997) recommends thinking about each interval and recommends practicing augmented seconds before singing the harmonic minor scale. These intervals are non-diatonic and diatonic. Cooper (1981) instructs students to sing minor many times with a well-tuned piano and he also writes that “solfeggio systems and English translations are entirely appropriate for these songs” (p. 241). Earlier in his text, Cooper recommends using the text of the songs or else the solmization system recommended by the instructor. On p. 4 of his text, Cooper refers to C-clef and bass clef as *do*-clef and *fa*-clef, which suggests a fixed system preference. His emphasis on the absolute pitch and using texts from the songs suggests either a fixed or neutral syllable system. DeLone (1981) provides the same instructions for singing major and minor scalar patterns. He instructs students to “Sound the tonic and relate the beginning and ending degrees to the tonic before singing. Intone on fixed *do* or *la*” (p. 391). That reveals a fixed or neutral system preference. Lloyd, Lloyd, and DeGaetani (1980) provide similar instructions for singing major as they did for singing minor. Overall, they recommend using either a neutral syllable or fixed syllable approach with the addition of numbers for both chordal function (root, third, and fifth) and scale-degree numbers (pp. 110, 113, 119). Levin and Martin’s (1988a) instructions are the same for minor as for major. Students should sing A (check with tuning fork), sing from A to tonic, sing the scale and tonic of the piece, and sing the melody. The authors show the intervals between tonic and other notes in the A minor scale in Lesson 6. They include pitch groups that share a parallel relationship, but most of the melodies do not share a relative or parallel relationship. The same lesson also contains instructions to sing certain melodies transposed by inserting a different clef and adding sharps or flats, which will continue to occur in following chapters. The practice of using a tuning fork in hopes of

developing absolute pitch is a method associated with a fixed approach and the emphasis on clef-reading also suggests a fixed approach.³⁴

Some textbooks indicate no bias. Damschroder (1995) provides instructions for singing minor melodies using fixed *do*, movable *do* (both relative and parallel methods), and letter names (p. 68). His descriptions do not indicate a bias. Horacek and Lefkoff (1989) request that students check their pitches with a piano, which are the same instructions they give for singing major melodies (p. 3). That alone does not indicate a bias. Cole and Lewis (1909) do not provide instructions when singing minor. Danhauser, Lemoine, and Lavignac (1910-1913) indicate relationships between a minor key and its relative major, but they do not provide singing instructions. Therefore, there is no bias in this category. Thomson (1981) recommends using scale-degree numbers or *sol-fa* syllables and letter names when singing minor melodies (p. ix). That indicates both movable and fixed methods. Table 6.24 reveals the biases observed in the instructions given for singing minor melodies.

³⁴ Karpinski (2000) states “fixed-*do* instruction would focus more closely on such skills as pitch reading, clefs, and transposition” (p. 147).

Table 6.24: Instructions for minor mode reveal a bias for the following system:

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				X
Benjamin, Horvit, and Nelson	X			
Benward	X			
Benward, Carr, et al	X			
Berkowitz, et al		X		
Bland	X			
Cole and Lewis				
Cooper				X
Damschroder				
Danhauser, Lemoine, Lavignac				
DeLone				X
Henry		X		
Horacek and Lefkoff				
Houlahan and Tacka			X	
Karpinski and Kram		X		
Krueger	X			
Levin and Martin				X
Lloyd, Lloyd, DeGaetani				X
Murphy, Phillips, et al		X		
Rogers and Ottman		X		
Stevenson & Porterfield	X			
Thomson	X			X

Question 5—What instruction does the text give when teaching twentieth-century idioms?

The instructions given for twentieth-century idioms indicate the solmization system recommended for post-tonal materials. Tonality persists in some of this music, so functional methods are possible for the music in that context, but music of this time period begins to stretch the limits of functional tonality and others use free atonality, which is not functional. Both fixed and movable systems encourage the use of neutral syllables or a fixed system for atonal literature because it does not follow the same rules as tonal music. However, T. Smith (1987) and Winnick (1984) explain that *do*-based minor does work well for chromatic and atonal music in addition to tonal music. Winnick proposes a pivot system used with movable *do* that accommodates chromatic and atonal music. If a textbook recommends movable-*do* syllables for post-tonal music, that suggests a bias for movable *do*. If a textbook recommends using a combination of approaches such as using a movable system for scalar patterns and a different set of syllables for non-tonal sections, that indicates a movable system preference for tonal melodies and a different system for non-tonal melodies. If a textbook recommends only using neutral syllables or fixed-*do* syllables for twentieth-century music, that indicates a preference of neutral or fixed syllables for post-tonal music, but it does not indicate a system preference for tonal music.

It is important to note that some of the books do not provide material consisting of twentieth-century idioms. Danhauser, Lemoine, and Lavignac (1910-1913) and Cole and Lewis (1909) were written too early to include those. Other books such as Krueger (2017), Houlahan and Tacka (1991 a/b), Stevenson and Porterfield (1986), Horacek and Lefkoff (1989), and Damschroder (1995) do not cover twentieth-century materials. Levin and Martin (1988a) describe the intervallic context of scales used in twentieth-century music, but they do not provide instructions for singing such literature.

Some textbooks emphasize fixed methods for post-tonal music. Benward (1989a) focuses on identification of melodic intervals in serial music and suggests much practice on singing them. Adler (1997) writes “the fixed *do* system may be more easily applied to nontonal or modulatory material” and recommends singing synthetic scales purely by interval (p. xv). After recommending any solmization system for post-tonal literature, Benward, Carr, Greer, McKee, and Torbert (2015) write “Ultimately, students should be encouraged to think in terms of all 12 notes, with C being zero” (p. 304). DeLone (1981) writes “In approaching this [twentieth-century] music, the reader will find it more fruitful, as a rule, to strive for intervallic accuracy rather than seeking pitch relations within a key” (p. 353).

Some books emphasize a mixture of fixed and movable methods. Benjamin, Horvit, and Nelson (2013) recommend that students use the following strategies when singing altered tertian harmonies: “(1) fixed *do* without inflected syllables, (2) fixed *do* with inflected syllables, (3) movable *do* look for rapidly moving chordal or scalar patterns, (4) neutral syllable” (p. 296). The first two indicate fixed systems and the third indicates a movable system. Therefore, this textbook indicates that a combination of strategies is useful. Karpinski (2017) recommends using familiar solmization syllables when singing melodies that use fragments of tonal patterns. However, for later material, Karpinski (2017) writes, “You should leave the syllables behind as quickly as possible since they serve merely as a crutch here and do not function tonally. One alternative is to sing on letter names” (p. 397). His recommendation of movable syllables for fragments of tonality suggests a movable bias for tonal and quasi-tonal material. However, the instruction to abandon syllables, possibly in favor of letter names, indicates a fixed approach for twentieth-century idioms. When teaching twentieth-century materials, Murphy, Phillips, Marvin, and Clendinning (2016b) advise “For the following melodies, compare the use of solfège syllables, scale-degree numbers, and integers, and determine the most useful system for each melody. Regardless of the system that you choose, look

for patterns such as scales, modes, and tetrachords to help orient your ear to unfamiliar music” (pp. 510-511). When teaching tonal materials, they recommend movable systems and when teaching atonal music, they recommend looking for patterns (therefore using the familiar movable system) and using integers (a fixed system). That indicates a combination of movable- and fixed-system approaches for twentieth-century music. Cooper (1981) recommends a mastery of simple and compound intervals and the ability to identify familiar scales or patterns when reading twentieth-century excerpts. Henry (1997) recommends using both an intervallic and functional approach when singing atonal and quasi-tonal music. He writes “As a performer, you must decide which measures of a given passage are most easily approached within a tonal framework and which should be sung intervallically” (p. 318). Lloyd, Lloyd, and DeGaetani (1980) recommend a combination of approaches when singing chromatic music and a twelve-tone row. They write “In reading a row such as this, the singer can usually divide the row into tonal units as well as read it completely by interval” (p. 346). Rogers and Ottman (2014) use a combination of approaches when teaching twentieth-century music. They write “When the collection or tonal center changes suddenly, focus on rapidly shifting the syllables....When you encounter more ambiguous segments, employ a tonally neutral strategy such as intervals or letter names” (p. 375). These books above instruct students to use both movable and fixed methods when singing twentieth-century music.

Some textbooks indicate movable system strategies when singing twentieth-century music. Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) emphasize structural pitches and deemphasize intervallic singing, which aligns more closely to movable system strategies. They write

Although the music is not tonal, many of the exercises emphasize certain pitches—through repetition or through their structural placement—and a good pitch memory, and awareness of the organization within a melody, will help you hear and sing the examples. In addition, a sense of the larger line and an

awareness of the connection between non-adjacent notes will be far more helpful than trying to sing each discrete interval (p. 274).

Likewise, Bland (1984) emphasizes structurally important notes and familiar patterns. When providing instruction on singing melodies based on quartal harmonies, he writes “Below the melody are alternative suggestions for relating to more familiar underlying patterns. If such comparative patterns are useful for singing melodies, the singer should not hesitate to construct these ‘artificial guides’” (p. 307). Relating notes to familiar patterns aligns more closely to movable system strategies, rather than to fixed system strategies. Thomson (1975) recommends using pitch patterns for singing twentieth-century music. He writes

You must develop your recall ability for other patterns—modal scales, whole tone scales, chordal arpeggiations of various forms, and any other larger pitch pattern that can be committed to memory—as a potential reference guides for the melodies you read. The fluent reader of music, like the fluent reader of language, is the one who through wide experience has developed a command of a broad array of patterns (p. 162).

Table 6.25 shows the results indicating solmization system(s) recommended for twentieth-century idioms. Table 6.26 lists a summary of expectations in books favoring various solmization systems regarding the five questions. Table 6.27 provides a summary of the results of the elements and other features of music as recorded in Tables 6.2 to 6.20 and Table 6.28 provides a summary of the results of the five questions as recorded in Tables 6.21 to 6.25.

Table 6.25: Instructions for twentieth-century idioms indicate a bias for which system

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Adler				X
Benjamin, Horvit, and Nelson	X			X
Benward				X
Benward, Carr, et al				X
Berkowitz, et al	X			
Bland	X			
Cole and Lewis				
Cooper	X			X
Damschroder				
Danhauser, Lemoine, Lavignac				
DeLone				X
Henry	X			X
Horacek and Lefkoff				
Houlahan and Tacka				
Karpinski and Kram	X			X
Krueger				
Levin and Martin				
Lloyd, Lloyd, DeGaetani	X			X
Murphy, Phillips, et al	X			X
Rogers and Ottman	X			X
Stevenson & Porterfield				
Thomson	X			

Table 6.26: Descriptions of textbooks favoring certain solmization systems

	Movable <i>do</i> (<i>do</i> -based minor) and scale-degree numbers	Movable <i>do</i> (<i>la</i> -based minor)	Fixed <i>do</i> / Letter names
Goals	To develop tonally functional thinking	To develop tonally functional thinking	To improve music reading
Instructions regarding solmization system	Emphasize parallel scale-degree function	Emphasize functional listening and using syllables determined by the key signature	Emphasize pitch
Instructions when teaching major mode	Emphasize learning tonal patterns and the tonic chord	Emphasize learning tonal patterns and the tonic chord	<ul style="list-style-type: none"> • Emphasize absolute pitch • Use intervallic, functional, or intuitive approaches
Instructions when teaching minor mode	<ul style="list-style-type: none"> • Emphasize learning tonal patterns and the tonic chord • Emphasize parallel relationships 	<ul style="list-style-type: none"> • Emphasize learning tonal patterns and the tonic chord • Emphasize hearing <i>la</i> as tonic 	<ul style="list-style-type: none"> • Emphasize absolute pitch • Use intervallic, functional, or intuitive approaches
Instructions when teaching twentieth-century idioms	<ul style="list-style-type: none"> • Encourage the use of neutral syllables or a fixed system for atonal literature • Recommend a combination of approaches, e.g., using a movable system for scalar patterns and a fixed system for non-tonal sections 	<ul style="list-style-type: none"> • Encourage the use of neutral syllables or a fixed system for atonal literature • Recommend a combination of approaches, e.g., using a movable system for scalar patterns and a fixed system for non-tonal sections 	<ul style="list-style-type: none"> • Encourage the use of neutral syllables or a fixed system for atonal literature

Table 6.27: Summary of the results of Tables 6.2-6.20³⁵

	Syllables	Scales	Keys	Organization	Melody characteristics	Minor	Modal Collections	Applied chords/modulation	Repertoire
Adler	M	F, M		F			F	F	
Benjamin, Horvit, Nelson		F, P	M	M	M	M (P)	R	P	
Benward	M	F, P	M	F, M	F, M	M	F, M	F	F, M
Benward, Carr, et al	M	F, P	M	F, M	F, M	M	F, M	F	F, M
Berkowitz, et al	F, P	F, M	M	M	M	P	P	M	
Bland		M	M	M	M	M	F, M	M	
Cole and Lewis		F, M	F	F	F	F	F, M	F	
Cooper	F, M	F, M	M, F				F, R	F	F, M
Damschroder	M	F, M	F	F, M	M	F, R		P	F, M
Danhauser, Lemoine, Lavignac	F	F, M	F	F	F	F		F	F
DeLone		F, M					F		F, M
Henry	M	F, P	M	M	M	P	P	P	
Horacek & Lefkoff		F, M	F	F, M	F	F		F, M	
Houlahan and Tacka	R	R	M	M	R	R	R	R	
Karpinski and Kram	F, M	F, P	F, M	M	M	M (P)	M (P)	P	P
Krueger	M	R	M	M	M	R	R	M	M
Levin and Martin	M	F, P	F	F	F, M	F	F	F, M	F, M
Lloyd, Lloyd, DeGaetani	M	F					F	F	F, M
Murphy, Phillips, et al	F, M	F, M	F, M	M	M	P	M	P	M
Rogers and Ottman	F, P	F, M	M	M	M	P	F, M	M	M
Stevenson and Porterfield	M	F, M	M	F, M	F		F, M	P	F, M
Thomson	F, M	F, M	M	M	M	P	F, M	P	F, M

³⁵ Abbreviations used in the chart: F = Fixed system; M = Movable system; P = parallel movable system; and R = Relative movable system.

Table 6.28: Summary of the results of Tables 6.21-25³⁶

	Goal	Solmization instructions	Major mode instructions	Minor mode instructions	20 th -century instructions
Adler	F	F	F	F	F
Benjamin, Horvit, and Nelson	M (R)	R	M	M	F, M
Benward	F, M	F, M	M	M	F
Benward, Carr, et al	F, M	M	M	M	F
Berkowitz, et al	F, M			P	M
Bland	M		M	M	M
Cole and Lewis	F, M				
Cooper	F, M	F	F	F	F, M
Damschroder	F, M		M		
Danhauser, Lemoine, Lavignac	F, M	F	F		
DeLone		F	F	F	F
Henry	M	M		P	F, M
Horacek and Lefkoff	F, M	F, M			
Houlahan and Tacka	M	R	M	R	
Karpinski and Kram	M	P	M	P	M, F
Krueger	F, M	R	M	M	
Levin and Martin	F, M		F	F	
Lloyd, Lloyd, DeGaetani	F, M		F	F	F, M
Murphy, Phillips, et al	M	M	M	P	F, M
Rogers and Ottman	F, M		M	P	M, F
Stevenson & Porterfield	F	F		M	
Thomson	F, M		M	F, M	M

³⁶ Abbreviations used in the chart: F = Fixed system; M = Movable system; P = parallel movable system; and R = Relative movable system.

CHAPTER VII

CONCLUSION

In conclusion, there are various solmization methods in use and few textbooks and other sight-singing related books are willing to stake a claim of preference for one method over the other. However, many of them have biases. The results will indicate which textbooks use movable- and/or fixed-system approaches, will rank them showing which textbooks use more pedagogical approaches of one specific method (movable or fixed), and will hopefully aid instructors in choosing appropriate textbooks.

The previous chapter described fourteen categories researched in each sight-singing textbook and revealed the results for each textbook. From those results, the preferences for each system were added (using the results of Tables 6.27 and 6.28) and divided by the number of categories, fourteen, giving equal weight to all categories, thereby providing an average of them. The percentages reveal how closely each book aligns with the various methods. See Table 7.1 for the results. Following that Table 7.2 provides a rank order of the textbooks based on the percentages for movable systems and for fixed systems.

Table 7.1: Percentages of biases determined from Tables 6.27 and 6.28

	Movable System	Parallel Movable System	Relative Movable System	Fixed System
Adler	14.2%	14.2%	14.2%	64.3%
Benjamin, Horvit, and Nelson	85.7%	71.4%	71.4%	14.3%
Benward	85.7%	85.7%	78.6%	64.3%
Benward, Carr, et al	85.7%	85.7%	78.6%	57.1%
Berkowitz, et al	78.6%	78.6%	50%	21.4%
Bland	78.6%	78.6%	78.6%	7.1%
Cole and Lewis	21.4%	21.4%	21.4%	57.1%
Cooper	50%	42.9%	50%	78.6%
Damschroder	64.3%	57.1%	57.1%	42.9%
Danhauser, Lemoine, Lavignac	14.3%	14.3%	14.3%	78.6%
DeLone	14.2%	14.2%	14.2%	50%
Henry	85.7%	85.7%	50%	14.3%
Horacek and Lefkoff	35.7%	35.7%	35.7%	57.1%
Houlahan and Tacka	85.7%	28.6%	85.7%	0%
Karpinski and Kram	100%	100%	64.3%	28.6%
Krueger	92.9%	64.3%	92.9%	7.1%
Levin and Martin	42.9%	42.9%	35.7%	78.6%
Lloyd, Lloyd, DeGaetani	28.6%	28.6%	28.6%	57.1%
Murphy, Phillips, et al	100%	100%	78.6%	28.6%
Rogers and Ottman	92.9%	92.9%	71.4%	35.7%
Stevenson & Porterfield	57.1%	57.1%	50%	50%
Thomson	92.9%	92.9%	78.6%	42.9%

Table 7.2 Rank order of textbooks for movable and fixed systems based on percentages from Table 7.1

Rank order for movable systems based on movable-system percentage

Karpinski and Kram- 100%
Murphy, Phillips, et al- 100%
Krueger- 92.9%
Rogers and Ottman- 92.9%
Thomson- 92.9%
Houlahan and Tacka- 85.7%
Benjamin, Horvit, and Nelson- 85.7%
Henry- 85.7%
Benward, Carr, et al- 85.7%
Benward- 85.7%
Bland- 78.6%
Berkowitz, et al- 78.6%
Damschroder- 64.3%
Stevenson and Porterfield- 57.1%
Cooper- 50%
Levin and Martin- 42.9%
Horacek and Lefkoff- 35.7%
Lloyd, Lloyd, DeGaetani- 28.6%
Cole and Lewis – 21.4%
Danhauser, Lemoine, and Lavignac- 14.3%
DeLone- 14.3%
Adler- 14.3%

Rank order for fixed systems based on fixed-system percentage

Danhauser, Lemoine, Lavignac- 78.6%
Cooper- 78.6%
Levin and Martin- 78.6%
Adler- 64.3%
Benward 64.3%
Horacek and Lefkoff- 57.1%
Lloyd, Lloyd, and DeGaetani- 57.1%
Cole and Lewis- 57.1%
Benward, Carr, et al- 57.1%
DeLone- 50%
Stevenson and Porterfield- 42.9%
Damschroder- 42.9%
Thomson- 42.9%
Rogers and Ottman- 35.7%
Murphy, Phillips, et al- 28.6%
Karpinski and Kram- 28.6%
Berkowitz, et al- 21.4%
Benjamin, Horvit, and Nelson- 14.3%
Henry- 14.3%
Bland- 7.1%
Krueger- 7.1%
Houlahan and Tacka- 0%

One question to consider is: Is an average the best way to evaluate the textbooks? Considering a different method will show an alternative method and reveal problems that creep into that method. Another option is that certain categories receive greater weight than others because the findings of some categories provide a strong bias for a particular system rather than revealing a pedagogical approach that possibly differs from an author's favored approach. For instance, solmization syllables, such as movable *do* or fixed *do*, that occur in the body of the text indicate the author's preference rather than merely suggesting it. Scale-degree numbers that occur in the text reveal a movable approach, but fixed system advocates use scale-degree numbers in addition to fixed syllables. This particular example falls in the same category of "notated solmization syllables" and could warrant different point systems within the same topic. The movable *do* or fixed *do* options receives more weight, but the scale-degree option receives less weight. A question to consider is: Is that an objective way to evaluate? Scale-degrees are a movable system and ought to be evaluated as such. Instead of using a weighted point system, the method used here evaluates each category and identifies the pedagogical approaches used in each category. Each category receives one point and is divisible by the number of unique categories (14). If multiple pedagogical approaches occur in the same category, then each counts as a point and the average percentages possibly sum up to a number greater than 100 percent. The number from that average reveals that of the observable categories what percentage of the pedagogical approaches aligns with the various systems.

There is a second way to rank the textbooks—that is by finding what percentage of each approach aligns with movable methods and with fixed methods. Calculating the rank in this fashion involves subtracting the percentages of the fixed and movable columns and arranging them in numerical order. The textbooks that are at the top of the chart have greater movable system percentages and the textbooks at the bottom of the chart have greater fixed percentages. Textbooks that do not uniquely identify with one

method are toward the middle of the fixed and movable approaches. The significance of such a chart is that it reveals what books align predominantly with one method (but not the other) at the extreme ends and it reveals those that use both approaches toward the middle. Table 7.3 shows the rank following this second method. It is important to note that books at the top such as Krueger (2017) and Houlahan/Tacka (1991a/b) do not use more movable approaches than some books such as Karpinski and Kram (2017) and Murphy, Phillips, Marvin, and Clendinning (2016b). However, they use fewer fixed approaches and therefore do not work as well with fixed-system users. The appendix shows the rank order of the textbooks, category by category using the rank order of Table 7.3.

Table 7.3: Rank order of the textbooks after taking the difference between fixed and movable percentages

	Difference between movable and fixed percentages	Higher percentage reveals emphasis on following system
Krueger	85.8%	Movable
Houlahan and Tacka	85.7%	Movable
Bland	71.5%	Movable
Benjamin, Horvit, and Nelson	71.4%	Movable
Henry	71.4%	Movable
Karpinski and Kram	71.4%	Movable
Murphy, Phillips, et al	71.4%	Movable
Berkowitz, et al	57.2%	Movable
Rogers and Ottman	57.2%	Movable
Thomson	50%	Movable
Benward, Carr, et al	28.6%	Movable
Benward	21.4%	Movable
Damschroder	21.4%	Movable
Stevenson and Porterfield	14.2%	Movable
Horacek and Lefkoff	21.4%	Fixed
Lloyd, Lloyd, DeGaetani	28.5%	Fixed
Cooper	28.6%	Fixed
Levin and Martin	35.7%	Fixed
DeLone	35.7%	Fixed
Cole and Lewis	35.7%	Fixed
Adler	50%	Fixed
Danhauser et al	64.3%	Fixed

Adler

The results reveal that Adler (1997) is appropriate for students at institutions using fixed systems. Only one category (solmization syllables used in the body of the text) fit the goals of movable systems. In the syllables category, Adler uses scale-degree numbers in the body of the text. Fixed system advocates have the option of using scale-degree numbers (in addition to fixed syllables) to aid the students in functional listening.³⁷ Even though the majority of categories work well with fixed systems, Adler's textbook is difficult for beginning fixed-system students. Chromatic melodies occur in a variety of keys (no systematic order) and scales such as major, minor, whole-tone, and modal occur in the first two pitch-oriented chapters. If students progress from the beginning to the ending of Adler's book, topics occur before their introduction, e.g., intervals of thirds, fourths, and fifths occur after having only learned major and minor scales and interval of seconds. Adler recommends for instructors to cover material in a different order,³⁸ which avoids the interval issue and creates a different concern. Following his suggestion, real literature does not occur until the second semester. Instructors may want to supplement with real literature. His textbook has an intervallic focus, more so than any other book researched for this dissertation. Intervals occur predominantly from small to large in diatonic and non-diatonic contexts. Overall, his textbook is appropriate for students with knowledge of fundamentals of music, especially of scales and intervals, because it requires students to sing diatonic and chromatic intervals out of context early in the class and to sing major, minor, whole-tone, and

³⁷ Authors, Karpinski (2000a), Bridges (1982), and Levin and Martin (1988) recommend the use of both a fixed and a movable system. They advise using different syllables for each approach (Karpinski 2000a, 90; Bridges 1982, 11; Levin and Martin 1988, 9). For fixed *do* users, that means using scale degree-numbers for a movable system.

³⁸ Adler recommends that students "cover Chapter I and the preliminary and non-rhythmic exercises of Chapters II through VII in the first semester, the newly composed, rhythmicized melodies in the third, and the more difficult intervals, alternate scales, and chords (Chapters VIII, IX, and X) in the fourth semester" (xi).

chromatic melodies as early as Chapter II. It works best for advanced students using fixed systems or no syllable system.

Cole and Lewis

The results reveal that Cole and Lewis's (1909) textbook is appropriate for students at institutions using fixed systems. Only three categories (scales, goals, and modal collections) fit the characteristics of movable systems, but they also fit the characteristics of fixed systems. Both movable and fixed system books present melodies in major keys toward the beginning of them, both share a goal of preparing students to sing pitches and rhythms, and they introduce modes sharing a relative relationship. The authors recommend their book for conservatory students or students of private teachers. The first eighty pages of their book, which includes all of Book I and two-thirds of Book II, present material in stepwise motion in order to focus on pitch and rhythms. That covers semester one and most of semester two assuming that one book corresponds to one semester. These stepwise melodies first occur in C major, followed by G major, F major, D major, and so forth. The melodies do not become more difficult, but the level of difficulty increases for fixed students because greater numbers of sharps and flats are more challenging for them. Students using movable systems will not benefit as much using this textbook because the pace is too slow. The end of Book II presents intervals from large to small, Book III presents modulation, and Book IV presents more advanced pitch and rhythm concepts and modal melodies. Instructors wanting to cover twentieth-century materials need to find supplementary exercises because twentieth-century materials do not occur in this textbook. Knowledge of clefs, time signature, rhythms, and pitch names are necessary before starting this series.

Danhauser, Lemoine, and Lavignac

Danhauser, Lemoine, and Lavignac (1910-1913) contain characteristics that align with goals of fixed systems for all categories where biases occur. The results from two of those categories (scales and goals) reveal shared characteristics with movable systems. Overall, the charts reveal a stronger fixed system bias. Danhauser, Lemoine, and Lavignac's volumes are appropriate for students with knowledge of intervals, scales, chords, and modulation. The books move too quickly for students lacking that knowledge because they introduce wide leaps (seconds through sixths) on p. 3 and melodies that either modulate or use secondary dominants in book 1A, which probably occurs in the first or second semester of a four-semester curriculum. Most colleges and universities cover that material during the sophomore year. Therefore, Danhauser, Lemoine, and Lavignac's textbook does not work well for average students, but is more appropriate for advanced students, such as students at conservatories. Instructors wanting to cover modal music twentieth-century materials need to find supplementary exercises because they do not occur in these volumes.

Levin and Martin

Levin and Martin (1988a) fit characteristics that align with the goals of fixed systems in most categories where biases occur except for one (syllables). They use scale-degree numbers in the body of their text. Some fixed system advocates use scale-degree numbers (in addition to fixed syllables) to aid the students in functional listening. Overall, 78.6 percent of the categories used fixed pedagogical methods and 42.9 percent use pedagogical methods of movable systems. They use fixed and movable methods, but emphasize more fixed teaching approaches. The authors encourage the use of a tuning fork to check students singing of A440 before every exercise. They emphasize clef reading and using different clefs when transposing. Of the books studied, their book is the only one to provide a detailed description and numerous practice exercises on

transposition using clef substitution and the circle-of-fifths method. In the book, every major and minor scale occurs at the rate of one per lesson, except where modes occur. In that case, two new scales occur in the same lesson—a major or minor scale plus a mode closely paralleling it, i.e. G major and G Mixolydian are in the same lesson, D minor and D Dorian occur in the same lesson, E minor and E Phrygian are in the same lesson, etc. It is good to note that topics taught in sight-singing occur before they occur in ear-training. For example, tonicization and modulation occur in sight-singing in Lessons 3 and 4 and then they occur in ear training in Lessons 25 and 31. They progress to twentieth-century topics, but mainly in the last five lessons. Instructors using this text may prefer to add supplemental material on twentieth-century idioms. Students using this text need knowledge of clefs, scales, key signatures, and rhythms before beginning.

Horacek and Lefkoff

The results reveal that Horacek and Lefkoff (1989) use teaching approaches common of movable and fixed systems. Of the fourteen categories observed, 57.1 percent reveal pedagogical approaches of fixed systems and 35.7 percent reveal teaching approaches of movable systems. Those percentages are somewhat close, which shows that it works with different approaches. The authors recommend using multiple methods—one for pitch naming, another for scale-degrees, and neutral syllables for arpeggio singing. Horacek and Lefkoff's textbook is a programmed book that contains only literature composed by the authors. A weakness of this programmed approach is the authors' suggestion that students listen to the correct sung response and compare it to their own performance to see if they sang it correctly. This is problematic because weak students may not be able to discern a correct response. The two volumes of their book divide into four parts covering the topics of intervals, melody and rhythm, harmony, and advanced harmony. These four parts do not need to be studied in order, but can be studied concurrently. This textbook does not cover modes or twentieth-century idioms.

Instructors need supplemental material if they desire to cover those topics. Students using this text need knowledge of clefs, meter, major and minor scales, rhythms, and pitch.

Cooper

. Cooper's textbook presents melodies in chronological order. The results show that Cooper uses more teaching approaches common of fixed systems (78.6 percent) and fewer approaches of movable systems (50 percent). They are fairly close. It is important to consider the two options that Cooper gives for progressing through his book when evaluating what solmization system to use. He suggests that instructors can choose to progress from Chapter 1 to the end or they can begin in Chapter 12 because the major and minor folk tunes are easier places to start in Chapter 12 rather than the modal melodies in Chapter 1. Beginning fixed-system and movable-system students will struggle with modes in Chapter 1 if the modes are not familiar to them and they have three difficulties with which to deal: the syllables, the sound of the modal scales, and the rhythms. If they are familiar with the modes, parallel movable-system students will struggle singing them because of the extra chromatic syllables required. Relative movable-system and fixed-system students will fare better than parallel movable-system students because the modal melodies do not require extra accidentals, so no extra solmization syllables are necessary. Another feature that is difficult for users of fixed and movable systems is that leaps to any interval occur in Chapters 1 and 12. Fixed-system users will also struggle with Cooper's suggestion of transposing the melodies by a fifth in Chapter 4 because of the range. Cooper recommends neutral syllables and using the text for vocal works. Cooper's textbook is unique in the fact that it lists pronunciation guides for Latin, French, German, and Italian in an appendix. All of his excerpts are from the vocal literature. Instructors who want to include instrumental works need to add supplementary materials.

DeLone

Similar to Cooper, DeLone (1981) presents melodies in chronological order. The results show that this textbook predominantly contains characteristics that align with pedagogical methods of fixed-syllable systems. However, certain features of this book are difficult for beginning fixed-system users. The features that are difficult are that non-chord tones and leaps to any diatonic pitch occur within the first four melodies, e.g., a leap of a minor sixth from $\hat{6}$ up to $\hat{4}$ occurs. Another reason is that the textbook contains major, minor, and modal melodies that use chromatic pitches and have key signatures containing various accidentals in melodies of the first two chapters, which is difficult for beginning fixed-system students. Students should have knowledge of clefs, key signatures, major, minor, and modal scales, intervals, rhythms, and time signatures before using this textbook. Overall, DeLone's book works well for advanced students of fixed systems. It occasionally uses functional approaches such as numbers, which works well to combine with a fixed approach.

Lloyd, Lloyd, and DeGaetani

Similar to Cooper (1981) and DeLone (1981), Lloyd, Lloyd, and DeGaetani (1980) also take a historical approach and present melodies in chronological order. They begin with a four-line staff and modal melodies, which is difficult for beginners learning movable or fixed systems if they are not familiar with either one. Following the four-line staff in Chapter 1 is the five-line staff in Chapter 2, then major and minor melodies, and twentieth-century music. The results show that this textbook predominantly contains characteristics that align with pedagogical methods of fixed systems. However, certain features of this book are difficult for users of fixed systems. The textbook introduces modes in Chapter 1 and melodies occur in various keys with no systematic order. Beginning students not familiar with modes and fixed syllables will struggle with this text. Advanced students will fare better with it. Students need knowledge of

fundamentals of music including clefs, staff, major and minor scales, key signatures, rhythms, and time signatures before using this textbook. The authors recommend using this book in semesters two through four, which is wise because of the difficulty level and the unfamiliar types of excerpts that occur in Chapter 1 of the textbook. Overall, this textbook works well for advanced students of fixed systems. It is important to mention the dual use of numbers. The authors suggest singing on numbers for two purposes: (1) to refer to scale-degree number and (2) to refer to root, third, and fifth of the chord. Using the same syllables for different functions can cause confusion for the students.

Benward

Benward (1989a/b) contains characteristics of textbooks aligned with both movable and fixed systems. Table 7.1 reveals that of the fourteen categories researched in this textbook, 85.7 percent use teaching methods of movable systems and 64.3 percent use teaching methods of fixed systems. The higher percentage of movable approach suggests a movable approach, but both percentages are relatively high. The textbook begins with a functional approach in Chapters 1 and 2 considering that the beginning melodies are stepwise and outline the tonic triad. Isolated intervals occur in these two chapters, but non-diatonic pitches do not occur in the melodies. Then in Chapter 3, the authors change approaches favoring an intervallic approach. Here, non-diatonic pitches occur in the melodies. Benward presents both intervallic and chordal concepts covering intervals primarily from small to large (seconds through sevenths) and covering all diatonic triads, secondary chords, Neapolitan sixth chords, and augmented sixth chords. He progresses through twentieth-century music in Volume two. Students using this textbook should have knowledge of clefs, key signatures, scales, rhythms, and meters. Beginning movable students will struggle with chromatic syllables necessary for this book in the early chapters and beginning fixed students will struggle with the key signatures found in early chapters. This book is for students using any of the methods.

Benward, Carr, Greer, McKee, and Torbert

Benward, Carr, Greer, McKee, and Torbert (2015) fit characteristics of textbooks aligned with both fixed and movable syllable systems' goals. Table 7.1 reveals that of the fourteen categories studied in this textbook, 85.7 percent use pedagogical methods of movable systems and 57.1 percent use pedagogical methods of fixed systems. The higher percentage of movable approach suggests a movable approach, but both percentages are relatively high. The authors suggest using both a fixed and a movable system—they recommend movable systems for tonal music, neutral syllables or fixed *do* for post-tonal music, and letter names for transposition. The textbook begins with a functional approach in Units 1 through 3 considering that the beginning melodies are stepwise and outline the tonic and dominant triads. Then in Unit 4, the authors change their approach favoring an intervallic approach. This book assumes knowledge of note values, time signatures, staff, clefs, major and minor scales, and key signatures. Beginning students will struggle with the rhythmic concepts early in the book, e.g. hemiola occurs on p. 2. Overall, this book is appropriate for students of movable systems or fixed systems.

Damschroder

Damschroder (1995) fits characteristics of textbooks subscribing to both fixed and movable systems. Of the fourteen categories researched in this book, 64.3 percent reveal pedagogical methods of movable systems and 42.9 percent reveal pedagogical methods of fixed systems, which are fairly close. Regarding syllable systems, Damschroder finds that

The choice of solmization system (i.e., the syllables that you pronounce while singing the pitches) influences how you think about the pitches of a melody. Several different systems are common in colleges and conservatories today, and your instructor probably has a specific preference, which you should follow. Although this text provides instructions for all common solmization methods, you should read only those instructions that deal with the particular method you will employ in your coursework (p. 3).

Damschroder emphasizes both fixed and movable approaches thereby making his book usable for both approaches. He presents keys in a systematic order and he focuses on diatonic and non-diatonic intervals early in the textbook, which are normally found in fixed books. He presents all diatonic chords and applied chords in separate chapters, which are commonly found in movable books. He provides instructions for all methods throughout his text and does not appear to favor one approach over the other. There is no twentieth-century music in this book. Instructors who desire to teach twentieth-century music need supplemental materials. Students need knowledge of scales, clefs and rhythms before using this text.

Stevenson and Porterfield

Stevenson and Porterfield (1986) fit characteristics of textbooks subscribing to both fixed and movable systems. Of the fourteen categories studied in this textbook, 57.1 percent use pedagogical methods of movable systems and 50 percent use pedagogical methods of fixed systems. They are fairly close. The argument for fixed systems is that the book emphasizes clef-reading and intervals (non-diatonic and diatonic ones occur early in the textbook), whereas the argument for movable systems is that it emphasizes harmonic approaches in introducing pitch patterns before melodies and in the methods used for teaching modulation, i.e. find pivot note. The clef-reading exercises are unique to this book and one other (Levin and Martin). Beginning students of all methods will experience difficulty with this text because the melodies contain various leaps early in training.³⁹ The variety of key signatures used early in the book is difficult for beginning fixed-syllable students. The authors recommend pitch names for clef-reading exercises, neutral syllables for interval exercises, various syllables for melodies, and singing on a neutral syllable or pitch names once familiar with the scale sounds. Students should have

³⁹ Gordon (1993) concludes “it [is] easier for students to perform tonal patterns that incorporate smaller intervals” (p. 186) and more difficult to perform larger intervals.

knowledge of the staff, clef signs, and basic rhythms before using this textbook. Instructors desiring twentieth-century materials need to introduce supplementary materials.

Thomson

Thomson (1981; 1975) fits characteristics of textbooks subscribing to movable systems. Of the fourteen categories studied in this textbook, 92.9 percent use pedagogical methods of movable systems and 42.9 percent use pedagogical methods of fixed systems. Further evidence of this movable rather than fixed preference is the following quote. Thomson (1981) states that “it is not really necessary to use an absolute pitch reference” (pp. viii-ix). Overall, the book favors harmonic context in its teaching approaches and uses some approaches affiliated with fixed systems. Thomson starts with teaching pitch frames of fifths, pitch frames of octaves, intervals in tonal music, familiar pitch patterns in tonal music, and later pitch patterns for twentieth-century music. He encourages the use of neutral syllables in his textbook, but he indicates that a movable system could be beneficial through Chapter 5 recommending the sole use of neutral syllables after that chapter. Thomson finds his book to be good for students with absolute pitch even though it emphasizes movable methods. Thomson (1975) writes “The method is reliable and helpful even for those few who are blessed (or plagued?) by possessing absolute pitch recall (sometimes erroneously called ‘perfect pitch’), because this method stresses musical patterns greater than individual pitches, thereby forcing attention to broad structure rather than details” (p. x). The *Introduction* volume starts at a beginner’s level. It begins with the basics in rhythm and pitch defining the note values and showing the pitches on the keyboard and staff. It is useful if students have knowledge of clefs, staff, major scales, and key signatures before beginning the textbook.

Benjamin, Horvit, and Nelson

Benjamin, Horvit, and Nelson (2013) fit characteristics of textbooks subscribing to movable systems. Table 7.1 reveals that of the fourteen categories studied in this textbook, 85.7 percent use pedagogical methods of movable systems and 14.3 percent use pedagogical methods of fixed systems. Those results suggest a movable system preference with the use of some fixed system approaches. There is much emphasis on functional hearing. They list *la*-based minor as the main type of movable system. However, in the chapter where minor occurs, there is more emphasis on parallel relationships suggesting *do*-based minor. Students using this book should have a firm grasp of clefs, key signatures, scales, note values, and meter signatures.

Houlahan and Tacka

Houlahan and Tacka (1991a/b) fit characteristics of textbooks aligned with relative movable-system goals. The authors borrow Kodály's use of relative movable-*do*, hand signs, rhythmic syllables, stick notation, and a rote-to-note approach. Their textbooks contain two semester's worth of material. The knowledge necessary before studying their text is knowledge of basic rhythms, clefs, pitch, and meter. Volume 1 is appropriate for beginning-level students or for a fundamentals class. It begins with melodies that outline the minor third between movable-*do* syllables, *sol* and *mi* and progresses to pentatonic and extended pentatonic melodies. Volume 2 progresses as far as harmony of I, IV, and V chords, modulation to the dominant, and modulation to the relative minor. Instructors wanting to cover more advanced pitch concepts including secondary triads, secondary dominants, and twentieth-century material need to use supplementary material for those topics. Each volume aligns with one semester of study.

Krueger

Krueger (2017) fits characteristics of textbooks aligned with relative movable system goals for most categories at 92.9 percent and a slightly lower percentage for parallel movable systems at 64.3 percent. Therefore, it works best for relative movable-*do* users, but also could work well for parallel movable system users. This textbook is appropriate for beginning-level students and makes few assumptions of student knowledge. Knowledge of major scales is helpful before using this textbook. Other knowledge is less necessary because of the author's approach. Krueger suggests rote approaches and presents a clef-less staff before introducing the students to normal staff notation. She begins with major pentachords, followed by major scales, then minor pentachords and minor scales. Next, she presents secondary dominant chords in different sections separating major-keyed from minor-keyed exercises and then introduces modulation. She does not cover twentieth-century materials. Instructors wanting to cover twentieth-century materials need to introduce supplementary materials for those topics.

Karpinski and Kram

Karpinski and Kram (2017) fit characteristics of textbooks aligned with parallel movable systems at 100 percent. There is a high percentage for relative movable systems as well at 64.3 percent. While the *Anthology* contains very little pedagogical suggestions, Karpinski's (2017) *Manual* contains a detailed explanation of the pedagogical methods. Karpinski recommends using parallel movable systems for tonal, modal, and fragments of tonality and to use letter names for clef reading and non-diatonic pitch collections. Karpinski and Kram's textbook is appropriate for beginning and advanced levels of college and university students because it starts with the basics adding one new element at a time and it provides an option for advanced students to skip the fundamental chapters and start with more advanced material (if instructors follow the suggestions from the *Manual*). Karpinski's (2017) *Manual* makes fewer assumptions than Karpinski and

Kram's (2017) *Anthology*. The anthology assumes knowledge of clef, meter, time signatures, major scales, minor scales, modes, and chords, whereas the *Manual* assumes knowledge of major scales. The *Manual* begins with a non-staff notation called protonotation to represent rhythm and pitch before progressing to staff notation. Karpinski introduces sequential and tonal patterns containing patterns commonly found in common-practice music in the *Manual*. The *Anthology* begins with major melodies, followed by minor, pentatonic, modes, fragments of tonality, and non-diatonic pitch collections. It covers some twentieth-century materials, but does not contain enough material for a full course on post-tonal music. Instructors need supplementary material if they want to have a course focusing solely on twentieth-century music. Modulation occurs towards the latter part (Chapter 69 out of 79 chapters) of the *Manual*, which is late for some curriculums.

Henry

Henry (1997) fits characteristics of textbooks aligned with parallel movable systems. Of the fourteen categories studied in this textbook, 85.7 percent use pedagogical methods of parallel movable systems, 50 percent use pedagogical methods of relative movable systems, and 14.3 percent use pedagogical methods of fixed systems. The relatively high percentage for relative movable systems indicates that it works for that method, but it works better for parallel movable systems for various reasons—major and minor scales occur before pentatonic scales, minor scales and minor melodies share a parallel relationship with other melodies, and there is an emphasis on melodic tendencies in minor and modes. His textbook focuses on harmonic context when covering tonal materials and a combination of intervallic and harmonic context approaches when covering twentieth-century materials. Students need knowledge of clefs, staff, key signatures, scales, time signatures, and rhythms before using this textbook. There are a couple of concerns with this book. Some leaps occur prematurely, e.g., a perfect fifth

leap from $\hat{6}$ down to $\hat{2}$ occurs on p. 55 in melody number one, which is in the chapter containing leaps among tonic and dominant chords. Similarly, chords occur prior to their introduction. Henry introduces secondary triads (supertonic, mediant, submediant, and leading-tone) on p. 153 of Chapter 11. However, a vi chord occurs on p. 88 in melody number two and a ii^o chord occurs on p. 133 in melody number one.

Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone

Berkowitz, Fontrier, Kraft, Goldstein, and Smaldone (2017) fit characteristics of textbooks subscribing to parallel movable systems. Of the fourteen categories studied in this textbook, 78.6 percent use pedagogical methods of parallel movable systems, 50 percent use pedagogical methods of relative movable systems, and 21.4 percent use pedagogical methods of fixed systems. The relatively high percentage for relative movable systems indicates that it works well for that method, but it works better for parallel movable systems. One unique factor of this book is the large amount of sing-and-play exercises. Sing-and-play exercises, melodies, duets, and rhythmic exercises occur throughout their curriculum. Students should have knowledge of the staff, clef signs, major and minor scales and key signatures before using this text. Features of the book that are important to note are: Minor occurs in melody number 30, which is early for some curriculums. Additionally, instructors should be aware that modulation occurs before secondary dominants in this textbook and that the index indicating page numbers of where concepts first appear is not always correct.⁴⁰ That can make it difficult to find some material.

⁴⁰ For example, under the heading of secondary dominants and tonicizations is supertonic; under supertonic, the book lists melody number 259. There are no supertonic or secondary dominants of the supertonic in melody number 259.

Murphy, Phillips, Marvin, and Clendinning

Murphy, Phillips, Marvin, and Clendinning (2016b) fit characteristics of textbooks aligned with parallel movable systems. Of the fourteen categories studied in this textbook, 100 percent use pedagogical methods of parallel movable systems, 78.6 percent use pedagogical methods of relative movable systems, and 28.6 percent use pedagogical methods of fixed systems. The relatively high percentage for relative movable systems indicates that it works well for that method, but it works better for parallel movable systems. The authors use multiple approaches to their teaching depending on the style of music—they recommend parallel movable syllables for major and minor tonal music, either parallel or relative movable syllables for modal music, and integers for post-tonal music. They suggest using movable syllables or pitch names for learning new clefs. Students need knowledge of clefs, basic rhythms (half and quarter notes in 2/4 time), and the sound of the major scale before beginning this book.

Rogers and Ottman

Rogers and Ottman (2014) fit characteristics of textbooks subscribing to movable systems, either relative or parallel. Of the fourteen categories studied in this textbook, 92.9 percent use pedagogical methods of parallel movable systems, 71.4 percent use pedagogical methods of relative movable systems, and 35.7 percent use pedagogical methods of fixed systems. The percentages of parallel and relative movable systems are close. Features that suggest a preference for parallel movable syllables are that the authors indicate that most people use parallel movable syllables and they use parallel movable syllables, not relative ones, in the body of the text below multiple exercises. However, they list relative movable *do* as an option when introducing minor mode. Overall, this textbook works with either approach. Students should have knowledge of clefs, the staff, major and minor scales, key signatures, time signatures, and note values before using this textbook. One issue with this textbook is that the pedagogical

instructions are not always correct. The authors instruct students to sing a grace note “as quickly as possible” (p. 28). There is no discussion on if it should be before or after the beat.

Bland

Bland (1984) fits characteristics of textbooks subscribing to movable systems, either relative or parallel. Instructors must subscribe to a structural approach in order to use this book. Of the fourteen categories studied in this textbook, 78.6 percent use pedagogical methods of movable systems and 7.1 percent use pedagogical methods of fixed systems. The percentages of parallel and relative movable systems are equal, so a preference can not be determined between those two. A characteristic that suggests a relative system preference is that Bland introduces pentachord melodies before the major scale. Characteristics that suggest a parallel system preference are that Bland introduces modulation in melodies that contain a mixture of major and minor keys and that the major scale occurs in the first pitch-oriented chapter. Students should have knowledge of the fundamentals of music including the staff, clef signs, major and minor scales, key signatures, note values, and time signatures before using this textbook. There is minimal twentieth-century music in this book (only in Chapters 13 and 14). Instructors desiring a post-tonal class need to use supplementary materials. The order of some materials is peculiar in this book and it is difficult to find a theory textbook that fits this order. The V7 occurs rather late. Bland introduces I, IV, and V in Chapters 2 through 5, followed by chromatic non-chord tones in Chapters 6 and 7 and then V7 in Chapter 8. Chapter 8 is four-sevenths of the way through the book. In a two-year curriculum, that topic does not occur until semester three, which is very late.

Concluding Thoughts

Important questions to consider are: Is this method dependable? Is it replicable? This exact study has not been done in the past, so it is not possible to say if it is replicable. However, comparing what other writers say about these books to the results of this study will help to see if the method is dependable. W. Marvin (2008) finds that the 2007 editions of Karpinski and Kram (2017) and Rogers (2014) are *do*-based minor textbooks (pp. 135-136). Even though those editions are earlier ones, the newer editions contain mostly the same exercises and same instructions with some extra information and exercises. The same teaching philosophy occurs in both the earlier and the current editions of each. The findings of Marvin agree with the results of this study; both of those textbooks favor *do*-based minor pedagogical methods. Additionally, W. Marvin finds that the 2007 edition of Krueger (2017) is a *la*-based minor textbook, which concurs with the results of this study as well. Karpinski (1988) finds that the fourth edition of Benward's *Sight Singing Complete* (Dubuque: Wm. C. Brown, 1986) orients itself toward a movable *do* approach (p. 286). The book is now in its eighth edition and this study also shows that Benward uses more movable-*do* approaches rather than fixed-*do* approaches.

Another important question is: Should books in the future commit to a system? Not committing makes the book marketable to everyone, whereas committing helps instructors identify books that agree with their pedagogical teaching methods. If books commit to a system, that means that the books should include more pedagogical advice. That benefits the students and instructors as long as the advice is good. The pedagogical instructions will aid the students in using a particular system and should offer suggestions to strengthen the weaknesses of the chosen system. For instance, movable system books should emphasize movable pedagogical approaches, but in areas where they are weak such as note-name reading, the authors could suggest fixed approaches as well. Similarly, fixed system books should emphasize fixed pedagogical approaches, but in areas where they are weak such as functional relationships, they should emphasize

movable approaches. These approaches ought to be explicitly written in the book rather than hidden, so that students and instructors will not miss the opportunity to practice the melodies using those particular methods. If future textbooks state their biases, the authors should include more examples that work well with their teaching approach rather than presenting a mixture of exercises that aim to work with all methods, but do not do justice to at least one of the systems (perhaps because there are not enough exercises to practice). For example, fixed system books need to present more than one or two melodies in each new key when introducing new key signatures.

Topics for Further Research

A similar study to this one could research different topics in the textbooks or they could add a way to evaluate the complexity of textbooks identifying for what level of student is each book appropriate. The level category could differentiate between a beginner who has limited knowledge of fundamentals, a beginner who has a decent knowledge of fundamentals, advanced students, and other levels in between. In evaluating different topics, future researchers could separate intervals-chords and implied chords-tonicization-modulation into separate categories rather than one category each, they could focus on different angles of the topics used in this study, and they could add rhythms or clefs to their topics evaluated. One way to evaluate a different angle of the topics is instead of looking at the scales covered in the whole text, they could evaluate the scales taught in the first quarter of a book, then in the first half, first three-quarters, and the whole in order to determine at what point each occurs. That could help determine for what level of student each is appropriate.

Research could explore this question: Is it possible to design a modular anthology that has one index for one approach and another for the other, with the idea that students obtain mastery over a wide variety of styles and genres no matter which path they take? Perhaps in this type of book, there are more melodies at similar complexity levels notated

in each key signature. Instructors could have an option of introducing chromatic pitches early or later in the curriculum. Greater numbers of melodies in each key signature ensure that fixed-system students receive a sufficient amount of practice in each key in order to gain proficiency; chromatic pitches could occur early in a curriculum using fixed systems. Movable instructors often introduce melodies in a variety of keys towards the beginning and present chromatic melodies later in the curriculum. That is an example where similar melodies could occur at different places in the curriculum. Ideally, all students graduating with a degree in music should be capable of sight singing music of a variety of styles, genres, and difficulty levels no matter which system(s) they learn.

Further research on this topic could explore if biases occur in written theory textbooks as well. They could explore if written theory books use Schenkerian approaches versus traditional approaches or they could determine for what level of student each book is appropriate. Schenkerian approaches probably focus on voice-leading (linear thinking), structural reductions, and consider all modulations to be tonicizations whereas a traditional approach will focus on chords (vertical thinking) and rules of four-part harmony. The topics researched in written theory books will differ from ones evaluated in this study. For instance, one should not evaluate solmization syllables used in a written theory textbook.

Other questions to consider are: Do other academic fields (in music or outside) have any kind of dual-language conflict like this? Can a method evaluate those? Lange and Kelley (1971) describe a national superiority bias found in most history textbooks. In the sciences, some books assume evolution as their foundation whereas others assume creation. From these underlying assumptions, authors of both groups draw different conclusions that conflict with each other. For example, the evolutionists conclude that the earth is old and the creationists conclude that it is young. In theology textbooks, some writers view the Bible as symbolic whereas others view it as literal.

Summary

In conclusion, there are various methods in use and few textbooks and other sight-singing related books are willing to stake a claim of preference for one method over the other. The results of this dissertation reveal that all sight-singing books use pedagogical methods of various systems, but most of them have a bias for predominantly one method. Approximately 64 percent of the textbooks (14 books) researched in this study use greater amounts of movable approaches, whereas just 36 percent (8 books) use greater amounts of fixed approaches. Overall, many of the textbook authors prefer movable methods whereas fewer prefer fixed methods. Most textbooks use a combination of movable and fixed approaches.

APPENDIX
TEXTBOOKS IN RANK ORDER, CATEGORY BY CATEGORY

Rank order: Notated solmization syllables reveal these biases (Table 6.3)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger	X			
Houlahan and Tacka			X	
Bland				
Benjamin, Horvit, and Nelson				
Henry	X			
Karpinski and Kram	X			X
Murphy, Phillips, et al	X			X
Berkowitz, et al		X		X
Rogers and Ottman		X		X
Thomson	X			X
Benward, Carr, et al	X			
Benward	X			
Damschroder	X			
Stevenson and Porterfield	X			
Horacek and Lefkoff				
Lloyd, Lloyd, DeGaetani	X			
Cooper	X			X
Levin and Martin	X			
DeLone				
Cole and Lewis				
Adler	X			
Danhauser, Lemoine, and Lavignac				X

Rank order: Scales used suggest these biases (Table 6.5)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger			X	
Houlahan and Tacka			X	
Bland	X			
Benjamin, Horvit, and Nelson		X		X
Henry		X		X
Karpinski and Kram		X		X
Murphy, Phillips, et al	X			X
Berkowitz, et al	X			X
Rogers and Ottman	X			X
Thomson	X			X
Benward, Carr, et al		X		X
Benward		X		X
Damschroder	X			X
Stevenson and Porterfield	X			X
Horacek and Lefkoff	X			X
Lloyd, Lloyd, DeGaetani				X
Cooper ⁴¹	(X)		X	(X)
Levin and Martin		X		X
DeLone	X			X
Cole and Lewis	X			X
Adler	X			X
Danhauser, Lemoine, and Lavignac	X			X

⁴¹ If instructors progress from Chapter 1 to the end, then an advanced student using any system bias is found. If instructors choose option 2 and start in Part two with the folk melodies, then either fixed or movable syllable systems may work with this book.

Rank order: Key signatures used suggest the following biases (Table 6.7)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger	X			
Houlahan and Tacka	X			
Bland	X			
Benjamin, Horvit, and Nelson	X			
Henry	X			
Karpinski and Kram	X			X
Murphy, Phillips, et al	X			X
Berkowitz, et al	X			
Rogers and Ottman	X			
Thomson	X			
Benward, Carr, et al	X			
Benward	X			
Damschroder				X
Stevenson and Porterfield	X			
Horacek and Lefkoff				X
Lloyd, Lloyd, DeGaetani				
Cooper ⁴²		(X)	X	X
Levin and Martin				X
DeLone				
Cole and Lewis				X
Adler				
Danhauser, Lemoine, and Lavignac				X

⁴² Starting in Chapter 1 with modes reveals a fixed or relative minor preference. Starting in Chapter 12 using Cooper's suggestion reveals a movable system preference thereby including parallel movable *do* as a possibility.

Rank order: Chapter headings reveal the following biases (Table 6.9)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger	X			
Houlahan and Tacka	X			
Bland	X			
Benjamin, Horvit, and Nelson	X			
Henry	X			
Karpinski and Kram	X			
Murphy, Phillips, et al	X			
Berkowitz, et al	X			
Rogers and Ottman	X			
Thomson	X			
Benward, Carr, et al	X			X
Benward	X			X
Damschroder	X			X
Stevenson and Porterfield	X			X
Horacek and Lefkoff	X			X
Lloyd, Lloyd, DeGaetani				
Cooper				
Levin and Martin				X
DeLone				
Cole and Lewis				X
Adler				X
Danhauser, Lemoine, and Lavignac				X

Rank order: Biases suggested by characteristics of early melodies (Table 6.11)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger	X			
Houlahan and Tacka			X	
Bland	X			
Benjamin, Horvit, and Nelson	X			
Henry	X			
Karpinski and Kram	X			
Murphy, Phillips, et al	X			
Berkowitz, et al	X			
Rogers and Ottman	X			
Thomson	X			
Benward, Carr, et al	X			X
Benward	X			X
Damschroder	X			
Stevenson and Porterfield				X
Horacek and Lefkoff				X
Lloyd, Lloyd, DeGaetani				
Cooper				
Levin and Martin	X			X
DeLone				
Cole and Lewis				X
Adler				
Danhauser, Lemoine, and Lavignac				X

Rank order: Minor mode characteristics suggest the following approaches (Table 6.13)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger			X	
Houlahan and Tacka			X	
Bland	X			
Benjamin, Horvit, and Nelson	X	X		
Henry		X		
Karpinski and Kram	X	X		
Murphy, Phillips, et al		X		
Berkowitz, et al		X		
Rogers and Ottman		X		
Thomson		X		
Benward, Carr, et al	X			
Benward	X			
Damschroder			X	X
Stevenson and Porterfield				
Horacek and Lefkoff				X
Lloyd, Lloyd, DeGaetani				
Cooper				
Levin and Martin				X
DeLone				
Cole and Lewis				X
Adler				
Danhauser, Lemoine, and Lavignac				X

Rank order: Introduction of modes demonstrates the following bias (Table 6.16)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger			X	
Houlahan and Tacka			X	
Bland	X			X
Benjamin, Horvit, and Nelson			X	
Henry		X		
Karpinski and Kram		<i>Manual X</i>		
Murphy, Phillips, et al	X			
Berkowitz, et al		X		
Rogers and Ottman	X			X
Thomson	X			X
Benward, Carr, et al	X			X
Benward	X			X
Damschroder				
Stevenson and Porterfield	X			X
Horacek and Lefkoff				
Lloyd, Lloyd, DeGaetani				X
Cooper			X	X
Levin and Martin				X
DeLone				X
Cole and Lewis	X			X
Adler				X
Danhauser, Lemoine, and Lavignac				

Rank order: Introduction of tonicization and modulation reveals the following approaches (Table 6.17)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger	X			
Houlahan and Tacka			X	
Bland	X			
Benjamin, Horvit, and Nelson		X		
Henry		X		
Karpinski and Kram		X		
Murphy, Phillips, et al		X		
Berkowitz, et al	X			
Rogers and Ottman	X			
Thomson		X		
Benward, Carr, et al				X
Benward				X
Damschroder		X		
Stevenson and Porterfield		X		
Horacek and Lefkoff	X			X
Lloyd, Lloyd, DeGaetani				X
Cooper				X
Levin and Martin	X			X
DeLone				
Cole and Lewis				X
Adler				X
Danhauser, Lemoine, and Lavignac				X

Rank order: Repertoire reveals the following biases (Table 6.20)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger	X			
Houlahan and Tacka				
Bland				
Benjamin, Horvit, and Nelson				
Henry				
Karpinski and Kram		X		
Murphy, Phillips, et al	X			
Berkowitz, et al				
Rogers and Ottman	X			
Thomson	X			X
Benward, Carr, et al	X			X
Benward	X			X
Damschroder	X			X
Stevenson and Porterfield	X			X
Horacek and Lefkoff				
Lloyd, Lloyd, DeGaetani	X			X
Cooper	X			X
Levin and Martin	X			X
DeLone	X			X
Cole and Lewis				
Adler				
Danhauser, Lemoine, and Lavignac				X

Rank order: Goals of textbooks reveal biases toward which systems (Table 6.21)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger	X			X
Houlahan and Tacka	X			
Bland	X			
Benjamin, Horvit, and Nelson			X	
Henry	X			
Karpinski and Kram	X			
Murphy, Phillips, et al	X			
Berkowitz, et al	X			X
Rogers and Ottman	X			X
Thomson	X			X
Benward, Carr, et al	X			X
Benward	X			X
Damschroder	X			X
Stevenson and Porterfield				X
Horacek and Lefkoff	X			X
Lloyd, Lloyd, DeGaetani	X			X
Cooper	X			X
Levin and Martin	X			X
DeLone				
Cole and Lewis	X			X
Adler				X
Danhauser, Lemoine, and Lavignac	X			X

Rank order: Instructions given for solmization systems reveal bias for which system(s)
(Table 6.22)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger			X	
Houlahan and Tacka			X	
Bland				
Benjamin, Horvit, and Nelson			X	
Henry	X			
Karpinski and Kram		X		
Murphy, Phillips, et al	X			
Berkowitz, et al				
Rogers and Ottman				
Thomson				
Benward, Carr, et al	X			
Benward	X			X
Damschroder				
Stevenson and Porterfield				X
Horacek and Lefkoff	X			X
Lloyd, Lloyd, DeGaetani				
Cooper				X
Levin and Martin				
DeLone				X
Cole and Lewis				
Adler				X
Danhauser, Lemoine, and Lavignac				X

Rank order: Instructions for singing major melodies indicate the following biases (Table 6.23)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger	X			
Houlahan and Tacka	X			
Bland	X			
Benjamin, Horvit, and Nelson	X			
Henry				
Karpinski and Kram	X			
Murphy, Phillips, et al	X			
Berkowitz, et al				
Rogers and Ottman	X			
Thomson	X			
Benward, Carr, et al	X			
Benward	X			
Damschroder	X			
Stevenson and Porterfield				
Horacek and Lefkoff				
Lloyd, Lloyd, DeGaetani				X
Cooper				X
Levin and Martin				X
DeLone				X
Cole and Lewis				
Adler				X
Danhauser, Lemoine, and Lavignac				X

Rank order: Instructions for minor reveal a bias for the following system (Table 6.24)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger	X			
Houlahan and Tacka			X	
Bland	X			
Benjamin, Horvit, and Nelson	X			
Henry		X		
Karpinski and Kram		X		
Murphy, Phillips, et al		X		
Berkowitz, et al		X		
Rogers and Ottman		X		
Thomson	X			X
Benward, Carr, et al	X			
Benward	X			
Damschroder				
Stevenson and Porterfield	X			
Horacek and Lefkoff				
Lloyd, Lloyd, DeGaetani				X
Cooper				X
Levin and Martin				X
DeLone				X
Cole and Lewis				
Adler				X
Danhauser, Lemoine, and Lavignac				

Rank order: Instructions for twentieth-century idioms indicate a bias for which system (Table 6.25)

	Movable system	<i>Do</i> -based minor movable <i>do</i>	<i>La</i> -based minor movable <i>do</i>	Fixed system
Krueger				
Houlahan and Tacka				
Bland	X			
Benjamin, Horvit, and Nelson	X			X
Henry	X			X
Karpinski and Kram	X			X
Murphy, Phillips, et al	X			X
Berkowitz, et al	X			
Rogers and Ottman	X			X
Thomson	X			
Benward, Carr, et al				X
Benward				X
Damschroder				
Stevenson and Porterfield				
Horacek and Lefkoff				
Lloyd, Lloyd, DeGaetani	X			X
Cooper	X			X
Levin and Martin				
DeLone				X
Cole and Lewis				
Adler				X
Danhauser, Lemoine, and Lavignac				

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Adám, Jenő. 1971. Growing in music with movable *do*. Translation of *The original Kodály method*. Trans. Louis Lajos Boros, Joseph Held, and Louis Munkachy. New York, NY: Pannonius Central Service, Inc.

Adám's book presents the teachings of Kodály's method for grades one to four following the order typically used in Hungary.

Adler, Samuel. 1997. *Sight singing: Pitch, interval, rhythm*. 2nd ed. New York: W.W. Norton & Company.

This sight-singing book, intended for the aural skills sequence at colleges and universities, uses an intervallic approach. Major, minor, and modal keys along with modulation, whole-tone melodies, and accidentals occur early in the book.

Allaire, Gaston. 1972. *The theory of hexachords, solmization, and the modal system; A practical application*. Musicological Studies and Documents 24. American Institute of Musicology.

This text provides a historical account of solmization used during and for Medieval and Renaissance music. It describes hexachordal solmization, mutation, rules of *musica ficta*, and application of the syllables.

Antinone, Patrick M. 2000. The effect of movable-*do* versus fixed-*do* sight reading systems on beginning choral students melodic sight-reading accuracy. Master's thesis, Texas Woman's University.

Antinone describes his study concerning which method of solmization (fixed *do* or movable *do*) aids beginning students more. The subjects, two seventh-grade classrooms, received sight-singing lessons in the keys of C and F with one group using fixed *do* and the other using movable *do*. The results revealed that the movable-*do* students improved more from the pre-test to the post-test.

Asmus, Edward P., Jr. 2004. Commentary: Music teaching and music literacy. *Journal of Music Teacher Education* (Spring): 6-8.

Asmus describes a decline in the sight-reading ability of college students that she ascribes to music educators losing sight of the goal of music literacy.

Autry, Mollie Rose. 1975. A study of the effect of hand signs in the development of sight singing skills. DMA diss., The University of Texas at Austin.

Autry describes her study on the effects of using hand signs and solfège during one semester of training in fifth grade students and college students. The experimental groups learned both hand signs and solfège, whereas the control group learned solfège alone. The results revealed that students in both groups performed equally well.

Bach, Carl Philipp Emanuel. [1759-97] 1949. *Essay on the true art of playing keyboard instruments*. Trans. and Ed. William J Mitchell. New York: WW Norton & Company Inc.

This text provides instructions on playing keyboard focusing on correct fingering, good embellishments, and good performance. Following the suggestions will develop good musicianship.

Baharloo, Siamak, Paul A Johnson, Susan K. Service, Jane Gitschier, and Nelson B. Fremier. 1998. Absolute pitch: An approach for identification of genetic and nongenetic components. *American Journal of Human Genetics* 62: 224-231.

Baharloo et al conclude that early music training and a genetic predisposition for absolute pitch are necessary for students to acquire absolute pitch.

Bailey, Wayne. 1992. *Aural skills for conductors*. Mountainview, CA: Mayfield Publishing Company.

This textbook is for conducting classes at colleges and universities; it integrates the skills learned in aural-skills classes with conducting. It focuses primarily on error detection and prepares conducting students to identify common errors made by ensembles.

Barbe, Walter B. and M. Milone. 1981. What we know about modality strengths. *Educational Leadership* 38/5: 378-380.

Barbe and Milone explain that people learn from one or a combination of modalities referring to aural, visual, and kinesthetic. The authors estimate that visual learners comprise about 30% of the population, mixed learner comprise about 30%, aural learner comprise 25%, and kinesthetic comprise 15%.

Barlow, Harold and Sam Morgenstern. 1948. *A dictionary of musical themes*. New York: Crown Publishers.

This book is a dictionary of musical themes for instrumental music.

_____. 1950. A dictionary of opera and song themes. New York: Crown Publishers.

This book is a dictionary of opera and song themes.

Barnes, James Woodrow. 1960. An experimental study of interval drill as it affects sight singing. PhD diss., Indiana University.

Barnes researched the effects of interval drill versus no extra interval drill on sight singing in forty-six freshman divided into two groups. The results revealed that the group that received extra drill performed better than the other group when sight singing intervals and melodies. However, Barnes noted that the ability to sight sing intervals did not reflect a direct improvement to sight singing melodies made up of these intervals.

Benjamin, Thomas, Michael Horvit, and Robert Nelson. 2013. *Music for sight singing*. 6th ed. Boston: Schirmer.

Benjamin, Horvit, and Nelson use a functional approach and incorporate fixed elements in their textbook. Their textbook begins with diatonic music, intervals taught in diatonic contexts and progresses to twentieth century idioms including serial music and exotic scales using mostly exercises composed by the authors.

Bennett, Peggy D. 1984. Sarah Glover: A forgotten pioneer in music education. *Journal of Research in Music Education* 32/1 (Spring): 49-64.

This article focuses on Glover's advancements in sight singing. Glover taught music, came up with a solfège system and a visual aid called the Norwich *sol-fa* ladder, and applied her solfège system and Norwich *sol-fa* ladder to her teaching.

Bentley, Arnold. 1959. Fixed or movable do? *Journal of Research in Music Education* 7/2 (August): 163-168.

In Bentley's response to Henry Siler's (1956) article, he described Siler's fixed system as cumbersome; he preferred a system that aided in the recognition of tonal patterns such as movable *do*.

_____. 1966. *Aural foundations of music reading*. London: Novello & Company.

This sight-singing book is for teachers of children and for students training as teachers. Bentley describes lessons in sight singing, similar to Curwen's model, beginning with sight-reading non-staff notation and later introducing staff notation and starting with leaps between *sol* and *mi*, followed by the pentatonic scale, filling in the other major-scale notes, the minor scale, and chromatics.

Benward, Bruce, Maureen Carr, Taylor Greer, Eric McKee, and Phillip Torbert. 2015. *Sight singing complete*. 8th ed. New York: McGraw Hill.

This sight-singing book is for a two-year aural-skills curriculum. It begins using a functional approach and changes to a chromatic intervallic approach in Unit 4.

Benward, Bruce. 1969. *Workbook in advanced ear training and sight singing*. Dubuque, IA: Wm. C. Brown Company Publishers.

This workbook is for a second-year sight-singing and ear-training course covering many styles of music ranging from the Renaissance to contemporary melodies including atonal ones.

_____. 1989a. *Advanced sightsinging and ear training: Strategies and applications*. Dubuque, IA: Wm. C. Brown Company Publishers.

This textbook is for a second-year college or university course in sight singing and ear training. This book is an abridgement of the author's *Sight Singing Complete* and covers topics such as secondary dominants, modulation, twentieth-century idioms, among others.

_____. 1989b. *Basic sightsinging and ear training*. Dubuque, IA: Wm. C. Brown Publishers.

Benward's textbook is for a first-year college or university course in sight singing and dictation. It begins using a functional approach and changes to a chromatic intervallic approach in Chapter 3.

Berkowitz, Sol, Gabriel Fontrier, Leo Kraft, Perry Goldstein, and Edward Smaldone. 2017. *A new approach to sight singing*. 6th ed. New York: W.W. Norton & Company.

This sight-singing textbook, intended for the aural-skills sequence at colleges and universities, uses a functional approach. It presents sight-singing melodies in a graduated level of difficulty beginning with tonal melodies and progressing to twentieth-century idioms and post-tonal melodies.

Bernhard, H. Christian III. 2004. The effects of tonal training on the melodic ear playing and sight reading achievement of beginning wind instrumentalists. *Contributions to Music Education* 31/1:91-107.

This study is on the effects of tonal training versus letter name training on the sight-reading achievement of beginning wind players. Bernhard divided students into two groups with one group learning solfège and the other learning letter names. The results revealed that tonal training better prepares students.

Birge, Edward B. 1988. *History of public school music in the United States*. New and Augmented ed. Reston, VA: Music Educators National Conference.

Birge traces the history of music education in the United States starting around the establishment of the singing schools and continuing to the twentieth century.

Bland, Leland D. 1984. *Sight singing through melodic analysis*. Chicago: Nelson-Hall Publishers.

This sight-singing textbook is for the aural skills sequence at colleges and universities. The melodies in this book have a unique format emphasizing structural tones and relationships shown through reductions influenced by Schenker's reductions.

Bluestine, Eric. 2000. *The ways children learn music: An introduction and practical guide to music learning theory*. Rev. 2nd ed. Chicago: GIA Publications, Inc.

This book describes music learning theory (theories about how children learn music most effectively) and Gordon's skill-learning sequence.

Blum, Beula Eisenstadt. 1968. Solmization in nineteenth-century American sight-singing instruction. Ed. diss., The University of Michigan.

This dissertation covers solmization in Europe up until 1800 and then describes the influences of European methods upon American methods focusing on fasola, shape notes, movable *do*, fixed *do*, and numbers.

_____. 1971. Solmization and pitch notation in nineteenth-century American school music textbooks. *Journal of Research in Music Education* 19/4 (Winter): 443-452.

This article describes methods used to teach solmization and pitch notation in nineteenth-century American music textbooks and authors who influenced music education during that time e.g., Pestalozzi and L. Mason.

Bobbitt, Richard. 1970. The development of music reading skills. *Journal of Research in Music Education* 18/2 (Summer): 143-156.

Bobbitt describes his research on music-reading skills in selected sixth grade students in Brookline, MA. He concludes that it is best to teach the pentatonic scales first followed by scales.

Boyle, J. David and Keitha V. Lucas. 1990. The effect of context on sight singing. *Bulletin of the Council for Research in Music Education* 106 (Fall): 1-9.

Boyle and Lucas describe their research on the effect of sight singing with and without harmonic accompaniment in thirty undergraduate students enrolled in Ear Training Lab I, III, or IV at the University of Miami. The results reveal that students in all three sections performed better when harmonic accompaniment was present.

Bridges, Doreen. 1982. Fixed and movable doh in historical perspective." *The Australian Journal of Music Education* 30: 11-15.

Bridges describes the history of movable and fixed *do* in England. She finds importance in both methods desiring a system that establishes both relative and absolute pitch relationships while using different syllables for each type.

Brink, Emily Ruth. 1980. A cognitive approach to the teaching of aural skills viewed as applied music theory. PhD diss., Northwestern University.

Brink describes the traditional goals of aural skills and then proposes goals for a cognitive approach to ear training. She lists different methods to develop these goals and describes some sight-singing texts that follow a traditional method and others that focus on aural comprehension.

Brittain, Lara M. 1998. Sight-singing pedagogy: Research applied to classroom methods. *Choral Journal* 39/1 (August): 9-15, 17-18.

Brittain describes sight-singing research and its application to group choral instruction. She writes about the following types of research—sight singing in harmonic context, correlation of error detection to sight singing, individual sight singing versus group sight singing, and evaluation of characteristics of good sight singers.

Brown, A. Malcolm. 1974. Letters, syllables, numbers, intervals: Which music reading system is best for young children? *Music Educators Journal* 61/3 (1974): 52-55, 101-103.

In choosing the best solmization method, Brown thinks that it is best to evaluate the ages and maturity level of the students, the amount of classroom time, and the goals of the class. He concludes that fixed names are better for instrumentalists and that movable *do* with *la*-based minor is better for general music classrooms.

Brown, Kyle. 2001. The effects of fixed and movable sightsinging systems on undergraduate music students' ability to perform diatonic, modulatory, chromatic, and atonal melodic passages. PhD diss., University of Oregon.

K. Brown describes his study regarding the effects of fixed and movable sight-singing training on undergraduates' abilities to sight sing passages in four music contexts: diatonic, modulatory, chromatic and atonal. The results for accurate pitches were not statistically different in diatonic, modulatory, and atonal music. However, the movable-system students performed significantly better on the chromatic music category and the fixed-system students performed better on label scores for the atonal music category.

_____. 2003. An alternative approach to developing music literacy skills in a transient society. *Music Educators Journal* 90/2 (Nov.): 46-54.

K. Brown describes a sight-singing system called a non-solfège mixed system, which combines fixed and movable elements. For a fixed system, he uses letter names and for a movable system, he uses numbers and numbers sign language based on the universal sign language.

Brown, Roger W. and Eric H. Lenneberg. 1954. A study in language and cognition. *The Journal of Abnormal and Social Psychology* 49/3: 454-462.

Brown and Lenneberg's study focuses on Whorf's thesis about the relationship between language and thought. Whorf claimed that different linguistic communities perceive and conceive reality in different ways and the language spoken in a community helps to shape the cognitive structure of the individuals speaking that language.

Brown, Walter A, Henry Sachs, Karen Cammuso, and Susan E. Folstein. 2002. Early music training and absolute pitch. *Music Perception* 19/4 (Summer): 595-597.

Brown et al conclude that early music training might not be necessary for absolute pitch to develop. Their research is problematic because they did not consider that the critical period for some children might be later than for other children.

Buchanan, Walter. 1946. Comparison of fixed and movable solfege in teaching sight singing from staff. PhD diss., University of Michigan.

Buchanan compared the sight singing methods of movable *do* and fixed *do*. He divided 82 students into ten groups; half of the students learned movable *do* and half learned fixed *do*. The results revealed that movable-*do* subjects made more improvements in every research group except for the youngest group.

Bullen, George W. 1877-78. The Galin-Paris-Cheve method of teaching considered as a basis of musical education. *Proceedings of the Musical Association*, 4th Sess.: pp. 68-93.

Bullen presented teaching approaches of the Galin-Paris-Chevé method.

Butler, David. 1989. Describing the perception of tonality in music: A critique of the tonal hierarchy theory and a proposal for a theory of intervallic rivalry. *Music Perception* 6/3 (Spring): 219-241.

Butler finds that both tonal and atonal music often imply a tonal center and that intervallic patterns in music affect the perception of a tonal center.

_____. 1997. Why the gulf between music perception research and aural training? *Bulletin of the Council for Research in Music Education* 132 (Spring): 38-48.

Butler describes a problem in aural-skills training: most music theorists do not use music cognition research to inform aural-skills instruction. Then, he describes interviews and observations that he made of aural-skills programs.

Butler, David and Mark Lochstampfor. 1993. Bridges unbuilt: Comparing the literature of music cognition and aural training. *Indiana Theory Review* 14/2 (Fall): 1-17.

Butler and Lochstampfor describe a disconnection between aural training and music cognition literature. They think that the level of discussion on solmization systems is shallow and conclude that aural training research will improve if the researchers make use of music cognition research.

Byars, Ronald Chris. 1996. A comparative review of six choral sight-singing manuals. Masters Thesis, University of Louisville.

Byars describes the primary methods of solmization used in elementary and secondary education and then he compares six sight-singing manuals used for those age groups. He recommends using movable *do* with *la*-based minor for younger children and that other systems, such as movable *do* with *do*-based minor, fixed *do*, or the interval method, are beneficial later.

Campbell, Patricia Shehan. 1991. *A cross-cultural guide to music teaching and learning*. New York: Schirmer Books.

Campbell describes solmization systems used in Europe and America from the 1600s to the twentieth century.

Carlson, Rachel. 2016. Teaching sight-reading to undergraduate choral ensemble singers: Lessons from successful learners. DMA diss., University of Maryland.

Carlson describes her survey of 48 vocalists or choral conductors who participated in either the Berwick Chorus or the conducting master class at the Oregon Bach Festival in the summer of 2015. She inquired about the importance of sight-reading in their professions, how they prepared for sight-reading, and how they preferred to teach sight-reading.

Casarow, Pattye Johnson. 2002. Sight-singing pedagogy: Analysis of practice and comparison of systems as described in related literature. DMA diss., University of Arizona.

Casarow describes the empirical and experimental research available concerning sight singing and selected systems used in the United States. She compares the systems of intervallic recognition, movable *do* (*la*-based minor), movable *do* (*do*-based minor), movable numbers, fixed *do*, and fixed pitch names. She has a bias towards movable *do* with *la*-based minor.

Cassidy, Jane W. 1993. Effects of various sightsinging strategies on nonmusic majors' pitch accuracy. *Journal of Research in Music Education* 41/4: 293-302.

Cassidy describes her research on the effects of five different singing strategies—(1) solfège and Curwen hand signs, (2) solfège alone, (3) letter names, (4) neutral syllable, and (5) no systematic sight-singing training. Her results reveal that both groups who learned solfège performed the best, followed by letter names and neutral syllables scoring similarly, and ending with the group who received no systematic training performing the worst.

Chase, Gilbert. 1966. *America's music: From the pilgrims to the present*. Rev. 2nd ed. New York: McGraw Hill Book Co.

Chase described the history of music in America from the pilgrims to the present time discussing singing schools, shape notes, advancements of the Mason brothers, and other topics.

Cho, Gene J. 1981. *Melodic, dyadic, and harmonic singing: Graded exercises*. Dubuque, IA: Kendall/Hunt Publishing Company.

Cho's exercise book is for use in conjunction with other aural-skills books. He designed the tonal patterns in the book to strengthen weaknesses and improve basic skills in aural training.

Choksy, Lois. 1981. *The Kodály context: Creating an environment for musical learning*. Englewood Cliffs, NJ: Prentice-Hall Inc.

Choksy describes Kodály's method addressing the teaching of it in Hungary, in America, and to older students.

_____. 1999a. *The Kodály method I: Comprehensive music education*. 3rd ed. Upper Saddle River, NJ: Prentice Hall.

Choksy describes the international spread of Kodaly's method, followed by the method, and teaching sequences for grades preschool through sixth grade.

_____. 1999b. *The Kodály method II: Folksong to masterwork*. Upper Saddle River, NJ: Prentice Hall.

Choksy describes a curriculum according to Kodály's method for use in secondary schools. His curriculum includes music from a variety of styles including Baroque, Classical, Impressionist, and early twentieth century and he gives lesson plans for teaching a piece in each period.

Choksy, Lois, Robert M. Abramson, Avon Gillespie, and David Woods. 1986. *Teaching music in the twentieth century*. Englewood Cliffs, NJ: Prentice Hall.

This book describes four predominant methods used in music education in the United States and provides music lessons for levels k-12, college students, and adults. These four methods consist of Kodály's approach, Jaques-Dalcroze's method, Orff's approach, and the comprehensive musicianship philosophy.

Christiansen, Thomas, ed. 2002. *The Cambridge history of western music theory*. Cambridge: Cambridge University Press.

This book contains a comprehensive history of western music theory beginning with the ancient Greeks and progressing to modern times. History of solmization was of particular importance to this dissertation.

Cleland, Kent D. and Mary Dobra-Grindahl. 2010. *Developing musicianship through aural skills: A holistic approach to sight singing and ear training*. New York: Routledge.

This sight-singing and dictation textbook emphasizes a functional approach using parallel movable-*do* syllables. It also stresses using a fixed system to strengthen clef-reading skills. This textbook begins with basic, diatonic material and progresses to chromatic, twentieth-century, and atonal material.

Cole, Samuel W. and Leo Rich Lewis. 1909. *Melodia: A comprehensive course in sight-singing (solfeccio)*. Philadelphia: Oliver Ditson Company.

Melodia works well with fixed systems. The first eighty pages contain stepwise melodies with non-chord tones occurring about halfway between those pages. The keys begin with C major for 108 exercises, followed by G major for nineteen, F major for twenty, and so forth.

Collins, Irma Helen Hopkins. 1979. Current attitudes and trends in the teaching of sightsinging in higher education. DMA diss., Temple University.

Collins describes a survey she sent to colleges and universities accredited by the National Association of Schools of Music. Her results reveal that the most commonly used solmization system are movable *do*, followed by neutral syllables, numbers, and fixed *do*.

Colwell, R. 1963. An investigation of musical achievements among vocal students, vocal-instrumental students, and instrumental students. *Journal of Research in Music Education* 11: 123-130.

Colwell investigated the musical achievement of 4,000 students who participated in vocal and instrumental music in grades five through twelve. The results revealed that piano training was the most significant factor in high achievement.

Cook, Nicholas. 1987. The perception of large-scale tonal closure. *Music Perception: An Interdisciplinary Journal* 5/2 (Winter): 197-205.

Cook describes a study in which he tested subjects in order to determine if listeners aurally perceive tonal closure; he defines tonal closure as beginning and ending a piece in the same key. His results conclude that people could not determine tonal closure in music longer than one minute in duration.

Cooper, Paul. 1981. *Dimensions of sight singing: An anthology*. New York: Longman, Inc.

Cooper's sight-singing textbook presents excerpts from the literature arranged chronologically beginning with chants from the fourth century and progressing to the present time.

Costanza, Peter and Timothy Russell. 1992. Methodologies in music education. In *Handbook on research in music teaching and learning*, ed. R. Colwell, 498-508. New York: Schirmer Books.

Costanza and Russell write about the methodologies of Dalcroze, Orff, Kodály, and Gordon along with instrumental methodologies of various method books and the Suzuki method.

Covington, Kate. 1992. An alternative approach to aural training. *Journal of Music Theory Pedagogy* 6/1: 5-18.

Covington describes an approach to teach ear training influenced by an understanding of three different ways (kinesthetic, aural, and visual) that students process information.

Coward, Henry. 1923. Tonic sol-fa and the minor mode. *The Musical Times* 64/967 (Sept. 1): 642-643.

Coward criticized fixed *do* and *do*-based minor. His criticism of fixed-*do* was that ordinary musicians are unable to sing at sight using fixed *do*. His criticism of *do*-based minor was that the affect of scale-degree one in major and minor has a different sound.

_____. 1932. The professional musician and tonic sol-fa: Sir Henry Coward's testimony. *The Musical Times* 73/1069 (March 1): 254-255.

Coward described biases that people in England have about solmization systems—some said that tonic *sol-fa* is a poor man's method and fixed *do* is for the professional musicians. Coward found that tonic *sol-fa* gave a good sense of tonality and aided in recognition of mental effects.

Cox, Gordon. 1993. *A history of music education in England, 1872-1928*. Brookefield, VT: Ashgate Publishing Company.

This book describes music education in England and the rivalry between fixed *do* and tonic *sol-fa*.

Cresci, Jonathan. 2010. Audiation: A key to trumpet performance." *International Trumpet Guild* 34/3: 50-51.

Cresci states that trumpet players need good audiation skills in order to play well. He claims that the best way to improve audiation is through movable-*do* solfège because he finds fixed *do* to be inefficient since the sound that the trumpet produces is not the note read from the staff.

Curwen, John. [1875] 1986. *The teacher's manual of the tonic sol-fa method*. Clarabricken, Co Kilkenny, Ireland: Boethius Press.

Curwen described his method of teaching tonic *sol-fa*, which begins with new patterns taught by rote and emphasizes the effects of both scale degrees and absolute pitch. In his lessons, he uses hand signs, a modulator (visual aid), movable *do* with *la*-based minor solfège, and a tuning fork.

_____. 1892. *The standard course of lessons and exercises in the tonic sol-fa method of teaching music with additional exercises*. 10th ed. London: J. Curwen and Sons.

Curwen's book consists of lessons on teaching the tonic *sol-fa* method. The book indicates modifications depending on students' ages and abilities.

Damrosch, Frank. 1894. *Popular method of sight-singing*. New York: G. Schirmer.

Damrosch's sight-singing book is for a fundamental sight-singing class covering at most one year of instruction. The text suggests using functional methods of movable *do* and scale-degree numbers and fixed system of letter names. Damrosch purposely begins with melodies in the key of D major, rather than C major and he uses a hybrid of numbers in minor using 6 for tonic.

Damschroder, David. 1995. *Listen and sing: Lessons in ear-training and sight-singing*. New York: Schirmer Books.

This sight-singing and dictation textbook is for two years of instruction and has characteristics of books that subscribe to movable and fixed methods—the earlier exercises are stepwise and outline the tonic, intervals occur in a functional context, chapter headings emphasize chords, and keys occur in a systematic order.

Danfelt, Lewis S. 1970. An experimental study of sight singing of selected groups of college students. Ed. diss., The Florida State University.

This study compares two groups of college students: one group learned composed music from Ottman's *Music for Sight Singing* and the other group learned contrived music from Lavignac's *Solfège des Solfèges*. The results showed that sight singing improved in both groups and there was no significant difference between the two groups.

Danhauser, A., L. Lemoine, and Albert Lavignac. 1910-1913. *Solfège des solfèges: Nouvelle édition du solfège pour voix de soprano de Henry Lemoine and G. Carulli augmentée d'un grand nombre de leçons d'ateurs anciens et modernes*. 34 vols. Paris: Henry Lemoine & Cie.

This 34-volume set of sight-singing books works well with fixed systems. Keys occur in a systematic order, fixed syllables appear directly in the body of the textbook, and clef reading gets special attention.

_____. 1923. *Solfège des solfèges*. Vol. 1A. Paris: Henry Lemoine & Cie.

This is an English translation of the 1910 edition.

Daniels, Rose Dwiggins. 1985. Relationships among selected factors and the sight-reading ability of high school mixed choirs. PhD diss., University of South Carolina.

This survey of high school directors reveals factors that correlate to sight-singing ability in high-school students. The results reveal that the method used did not correlate to success. Instead, factors of ethnic make-up, having a piano at home, singing in all-state chorus, occasional rote learning, playing an instrument, and having an enthusiastic sight-singing teacher contribute to sight-singing ability.

_____. 1986. Relationships among selected factors and the sight-reading ability of high school mixed choirs. *Journal of Research in Music Education* 34/4 (Winter): 279-289.

This research on the relationship between sight-singing ability and selected variables reveals that the factors of ethnic make-up, having a piano at home, singing in all-state chorus, occasional rote learning, playing an instrument, and having an enthusiastic sight-singing teacher contribute to sight-singing success.

Dannhäuser, A. 1891. *Solfège des solfèges in three books*. New York: G. Schirmer, Inc.

These sight-singing books are popular among fixed system advocates. This publication uses volumes 1A, 2A, and 3A minus the supplementary studies of the Henry Lemoine publication by Danhauser, Lemoine, and Lavignac (1910-13).

Darazs, Arpad. 1966. The Kodaly method for choral training. *The American Choral Review* (March): 8-12.

Darazs recommended using Kodály's method when teaching children to sing and he suggested various method books.

Davenport, Linda G. 1992. American instruction in sight-singing: Then and now. *The Bulletin of Historical Research in Music Education* 13/2 (July): 90-111.

Davenport describes the methods used in singing schools in Maine in the early 1800s and compares those to singing methods used in schools during the late twentieth century. The singing schools used the four-syllable solfège system, but today more elementary schools use movable *do* while others use fixed *do* and numbers.

Davidson, Lyle, and Larry Scripp. 1988a. A developmental view of sight singing. *Journal of Music Theory Pedagogy* 2/1: 10-23.

The authors describe the development of sight singing in children up to adults. Prior to college, students learn contour patterns, perception of tonal function, basic knowledge of scales, and repertoire for their instrument. They find that internalized knowledge of tonal space is lacking in most college students.

_____. 1988b. Sightsinging at New England Conservatory of Music. *Journal of Music Theory Pedagogy* 2/1: 3-9.

Davidson and Scripp describe sight-singing development and the sight-singing curriculum at the New England Conservatory of Music. Their solfège classes aim to teach sight singing, problem solving in performance, reading in all seven clefs using fixed-*do* solfège, and tonality using scale-degree functions.

Davidson, Lyle, Larry Scripp, and Joan Meyaard. 1988. Sightsinging ability: A quantitative and qualitative point of view. *Journal of Music Theory Pedagogy* 2: 51-68.

The authors describe the quantitative and qualitative methods used for the examination of sight-singing abilities at the New England Conservatory.

Davidson, Lyle. 1994. Songsinging by young and old: A developmental approach to music. In *Musical Perceptions*, eds. Rita Aiello and John Sloboda, 99-130. New York: Oxford University Press.

Davidson describes a three-stage model leading to musical development focusing on the development in children and adults. In stage one, students sing contour schemes, in stage two, singers can make changes to a melodic grouping but not to individual notes, and in stage three, students can modify notes on demand and sing specific notes with good intonation.

De Lone, Richard. 1981. *Literature and materials for sightsinging*. New York: Holt, Rinehart, and Winston.

This sight-singing textbook presents melodies in a chronological order beginning with plainchant and progressing to the twentieth century. It is for students with a good understanding of fundamentals because both major and minor melodies plus non-diatonic pitches occur early in the book.

De Zeeuw, Anne Marie and Roger E. Foltz. 1973. *Sight singing and related skills Revised*. Manchaca, TX: Sterling Swift Publishing Company.

This textbook begins with advanced rhythm and pitch topics emphasizing twentieth-century idioms, but also including music from the twelfth to the twentieth centuries. The exercises do not occur in a graded order, but rather the organization is by topic.

_____. 1978. *Sight singing: Melodic structures in functional tonality*. Manchaca, TX: Sterling Swift Publishing Company.

This sight-singing book contains music predominantly from the Baroque, Classical, and Romantic periods. It begins with tonal music and progresses to chromatic music that modulates, but does not include twentieth-century materials. The authors recommend using a combination of movable and fixed systems.

Demorest, Steven. 1998a. Improving sight-singing performance in the choral ensemble: The effect of individual testing. *Journal of Research in Music Education* 46/2 (Summer): 182-192.

Demorest describes his research about the effects of individual testing in conjunction with group instruction on 306 choir subjects from six high schools in the state of Washington. The results reveal that the choir students who received individual testing improved more than the choir students who did not.

_____. 1998b. Integrating sight-singing into the high school choral rehearsal." *The Choral Journal* 39/5 (December): 55-58.

Demorest describes rhythmic and pitch methods used when sight-reading in a choral rehearsal.

_____. 2001. *Building Choral Excellence*. New York: Oxford University Press.

Demorest stresses the importance of teaching a sight singing method to high-school choir students and he describes materials that instructors may find useful. He prefers movable *do* with *la*-based minor, but he presents both movable *do* with *la*-based minor and fixed *do* as the primary methods used in grade school.

_____. 2004. Choral sight-singing practices: Revisiting a web-based survey. *International Journal of Research in Choral Singing* 2/1: 3-10.

Demorest describes a web-based survey, asking about favored solmization system, completed by 221 middle and high school choral directors. His results show that 64% favored the moveable-*do* system, 21% favored numbers, and the remaining 15% favored fixed-*do*, neutral syllables, or other systems. Of the 64%, 47% favored *la*-based minor and 17% favored *do*-based minor.

Demorest, Steven and William May. 1995. Sight-singing instruction in the choral ensemble: Factors related to individual performance." *Journal of Research in Music Education* 43/2: 156-167.

Demorest and May describe their research on factors related to sight-singing ability concluding that years of choir experience is the most important factor, followed by piano lessons, instrumental lessons, and voice lessons. Singers using movable-*do* syllables achieved significantly higher scores than those using fixed-*do* syllables, but they thought the skill levels of the teachers affected these results.

Devore, Richard and Ralph Lorenz. 2000. Teaching ear training using medieval and Renaissance music. *Journal of Music Theory Pedagogy* 14: 75-91.

Devore and Lorenz describe their method of teaching students to sight sing Medieval and Renaissance music during the third semester. They suggest using one of three solmization systems: Guidonian hexachords, *do*-based minor movable *do*, or fixed-*do*.

Dodson, Thomas A. 1983. Developing music reading skills: Research implications. *Update: The Applications of Research in Music Education* 1/4: 3-6.

Dodson describes the research supporting the rote approach when developing music-reading skills.

Dobszay, L. 1972. The Kodály method and its musical basis. *Studia Musicologica Academiae Scientiarum Hungaricae* T 14, Fasc. 1/4: 15-33.

Dobszay describes Kodály's method focusing on solmization, folk songs, the importance of singing, education in the schools, and culture.

Dowling, W. Jay. 1986. Context effects on melody recognition: Scale-step versus interval representation. *Music Perception: An Interdisciplinary Journal* 3/3 (Spring): 281-296.

Dowling describes his research on students at the University of Texas at Dallas and seven professional musicians in order to determine if context affects the recognition of melody. In his study, inexperienced listeners and experienced listeners performed equally well on same and different contexts, while the moderately experienced listeners performed well on the same context but at chance levels on different contexts. Dowling concludes that inexperienced listeners use intervallic strategies, moderately experienced listeners use tonal framework strategies, and experienced musicians use a variety of strategies.

Dragone, Luann R. 1994. Review of *sightsinging complete* by Bruce Benward and Maureen Carr and *foundations of music and musicianship* by David Damschroder. *Theory and Practice: Journal of the Music Theory Society of New York State* 19: 153-157.

Dragone finds that Benward and Carr's sight-singing text is appropriate for conservatory students and for advanced students of sight singing, whereas Damschroder's comprehensive text is appropriate for beginning students and needs supplementary material for advanced levels of aural skills.

Edlund, Lars. 1963. *Modus Novus*. London: J. & W. Chester Ltd.

This textbook is for students studying music of the early twentieth century who have a firm grasp on diatonic and chromatic music. Pitch concepts occur (but not advanced rhythmic ones) and intervals occur from small to large in an atonal context. Edlund recommends using the note names when singing.

_____. [1967] 1974. *Modus vetus: Sight singing and ear-training in major/minor tonality*. London: J. & W. Chester Ltd.

This sight-singing and ear-training text presents graded sight-singing exercises beginning with diatonic major and minor exercises, followed by modal melodies, and then chromatic harmonies. These occur in melodic exercises, rhythmic exercises, figured bass exercises, and keyboard harmony exercises.

Educational Council. 1925. The movable do vs. the fixed do and relative vs. tonic minor. *Music Supervisors' Journal* 12/1 (October): 64-67.

The Educational Council at the Kansas City meeting responded to complaints about the solmization system used in schools. The council preferred movable *do* with *la*-based minor for elementary students and thought those children would have no difficulty changing to *do*-based minor when they were in high school.

Elliot, Charles A. 1982. The relationship among instrumental sight-reading ability and seven selected predictor variables." *Journal of Research in Music Education* 30/1: 5-14.

Elliot writes about his research on the relationships between instrumentalists' sight-reading ability to seven variables in undergraduate wind instrumentalists at the University of South Carolina. He concludes that rhythm-reading ability is the best predictor of instrumentalists' sight-reading scores.

Feierabend, John. 2001. *Conversational solfege*. Level 1. Chicago: GIA Publications, Inc.

This is a teacher's manual influenced by Kodály's method. Similar to Kodály's method, the teaching of early melodies is by rote and notation occurs later. Folk tunes emphasizing *do-re-mi* occur first since much of American folk tunes emphasizes those notes.

Fine, Philip, Anna Berry, and Burton Rosner. 2006. The effect of pattern recognition and tonal predictability on sight-singing ability. *Psychology of Music* 34/3: 431-437.

This study investigates the roles of pattern recognition and tonal predictability on sight-singing ability. Students who scored higher on intervals scored higher on sight singing implying that students who recognize patterns are better readers.

Fish, Arnold and Norman Lloyd. 1993. *Fundamentals of sight singing and ear training*. Long Grove, IL: Waveland Press, Inc.

Fish and Floyd's textbook is for the first year of an aural-skills course.

Fletcher, Stanley. 1957. Music reading reconsidered as a code-learning problem. *Journal of Music Theory* 1/1 (March): 76-96.

Fletcher drew analogies in learning to read written language and learning to read music. He found reading of the notes to be more of a code-learning problem and did not find any value to the use of a solmization system.

Floyd, Eva and Kelly D. Bradley. 2006. Teaching strategies related to successful sight-singing in Kentucky choral ensembles. *Update: Applications of Research in Music Education* 25/1 (Fall-Winter): 70-81.

Floyd and Bradley describe a survey about sight singing that they sent to choral directors whose choruses received a distinguished score on the KMEA district choral performance evaluations. Most choir directors responded that they use movable methods and about a tenth of them use fixed and movable methods.

Foltz, Roger E. 1976. Sight singing: Some new ideas on an old institution. *College Music Symposium* 16: 95-100.

Foltz finds it necessary to teach pedagogical techniques that accommodate the singing of twentieth-century literature while using traditional techniques. He emphasizes the importance of intervallic training early in musical studies and describes an intervallic approach that introduces complimentary intervals together rather than starting small to large.

Foulkes Levy, Laurdella. 2006a. Music for everyone: Pedagogical tools for all. I: Introduction and a brief history on solmization syllables. *Kodaly Envoy* 32/3: 15-22.

Foulkes Levy provides a history on solmization syllables starting with Guido and progressing to Curwen.

_____. 2006b. Music for everyone: Pedagogical tools for all. II: A comparison of two solmization systems. *Kodaly Envoy* 32/4: 5-6.

This article compares fixed *do* to movable *do* calling fixed *do* a visual first system and movable *do* an aural first system. Foulkes-Levy writes that both fixed and movable *do* are important, but states that the aural relationships should receive more emphasis.

Friedman, Michael L. 1990. *Ear training for twentieth-century music*. New Haven: Yale University Press.

Friedman's sight-singing and dictation textbook is for use as either an analysis book of twentieth-century music with an ear-training component or an advanced ear-training book for use in one year. He introduces techniques of twentieth-century music by focusing on sets of dyads, trichords, tetrachords, and sets of more than four elements using pitch-class numbers instead of solfège.

Friedman, Milton M. 1981. *A beginner's guide to sightsinging and musical rudiments*. Englewood Cliffs, NJ: Prentice Hall.

Friedman's sight-singing book is appropriate for one-semester fundamental aural-skills classes. It takes a functional approach, uses original and folk melodies, covers diatonic major melodies for the majority of the book, and introduces minor in the final chapter.

Fuller-Maitland, J.A. 1921. Tonic-sol-fa: Pro and con. *The Musical Quarterly* 7: 68-72.

Fuller-Maitland described cons and a pro of the tonic-*sol-fa* system. The cons were (1) composers wrote bad music for that system, (2) non-staff notation was not useful, (3) *la*-based minor was a mistake, and (4) modulations were difficult. An advantage he listed was that singers of tonic *sol-fa* sang with better intonation.

Gauldin, Robert and Mary Wennerstrom. 1989. Pedagogy. *Music Theory Spectrum* 11/1: 66-73.

They describe trends in theory pedagogy from 1979 to 1989 and include a bibliography that demonstrates the major trends in undergraduate theory.

Ghezso, Marta Arkossy. 2005. *Solfège, ear training, rhythm, dictation, and music theory: A comprehensive course*. 3rd ed. Tuscaloosa, AL: The University of Alabama Press.

This aural skills' textbook contains instruction in theory, sight singing, rhythm, and dictation starting with tonal music and progressing to chromatic, modal, and atonal music using exercises composed by the author. Ghezso recommends using any solmization system, but claims that syllables are only a means of articulation.

Glover, Sarah. 1982. *Scheme for rendering psalmody congregational, 1835; Together with the sol-fa tune book, 1839*. Clarabricken, Ireland: Boethius Press Limited.

Glover wrote about the early beginnings of *sol-fa* and described her method consisting of the tonal ladder, chromatic solmization, and rhythmic notation.

Gordon, Edwin E. 1985. Research studies in audiation: I. *Bulletin of Research in Music Education* 84: 34-50.

Gordon describes five stages of audiation—meter perceived, tonality perceived, melodic patterns retained, patterns recalled, and patterns predicted—and he compares these stages in children and adults. One conclusion that he draws is that children go through stages of audiation in a different order than adults.

_____. 1987. *The Nature, description, measurement, and evaluation of music aptitudes*. Chicago: GIA Publications.

Gordon's research indicates that music aptitude is both a genetic and environmental product. A child is born with the potential to reach a certain level in music and needs to have formal and informal experiences with music in order to reach that level of musical aptitude.

_____. 1989. Tonal syllables: A comparison of purposes and syllables. In *Readings in Music Learning Theory*, eds. Darrel L. Waters and Cynthia Crumb Taggart, 66-71. Chicago: GIA Publications.

Gordon compares various solmization systems while emphasizing the importance of audiation. His view that *la*-based minor is superior taints his descriptions of the other systems.

_____. 1993. *Learning Sequences in Music: Skill, Content, and Patterns*. Chicago: GIA Publications, Inc.

Gordon defines audiation and explains how students learn music. In the sight-singing portion of the book, he lists the advantages of movable *do* with *la*-based minor and the disadvantages of various other solmization systems.

Gottschalk, Arthur and Phillip Kloeckner. 1997. *Functional hearing: A contextual method for ear training*. New York: Ardsley House Publishers Inc.

Gottschalk and Kloeckner's sight singing and dictation textbook begins with diatonic melodies and ends with non-tonal melodies in the twentieth-century style. The authors encourage a functional solmization system for tonal melodies and a neutral syllable for modal and atonal excerpts.

Gould, Murray J. 1979. *Paths to musical thought: An approach to ear training through sight singing*. New York: Holt, Rinehart, and Winston.

Murray's sight-singing and dictation textbook is for a two- or three-year curriculum beginning with diatonic melodies and progressing to twentieth-century topics. The goal of this book is to help students perceive musical relationships and understand musical structure.

Grashel, John. 1981. The gamut and solmization in early British and American texts. *Journal of Research in Music Education* 29/1 (March): 63-70.

Grashel describes the influence of British texts on the American texts from the sixteenth to the twentieth century

Greene, Paul C. 1937. Violin performance with reference to tempered, natural, and Pythagorean intonation. *Iowa State Musician* IV: 232-251.

Greene found predictable deviations from the tempered scale in the intervals of seconds and thirds in eleven performances of a Kreutzer violin etude. Major seconds and thirds tended to be larger and minor seconds and thirds tended to be smaller. The study revealed that not all intervals of the same size and quality are the same.

Gregersen, P. K., E. Kowalsky, N. Kohn, and E. Marvin (2000). Early childhood music education and predisposition to absolute pitch. *American Journal of Medical Genetics*: 98: 280-282.

The authors describe a survey on absolute pitch in eight subsets of music students enrolled in music theory classes at thirteen institutions in the US. Their survey questions pertain to AP ability, early music training, and family history. They conclude that early childhood music exposures increase the chances of AP in genetically susceptible individuals.

Grutzmacher, Patricia Ann. 1987. The effect of tonal pattern training on the aural perception, reading recognition, and melodic sight-reading achievement of first-year instrumental music students. *Journal of Research in Music Education* 35/3 (Autumn): 171-181.

Grutzmacher describes her research on the effects of tonal pattern training on sixth-grade students in Ohio. She observed that the group who learned tonal patterns could sight-read better and could identify major and minor more successfully than the control group. Both groups performed equally well in reading recognition.

Guelker-Cone, Leslie. 1998. The unaccompanied choral reader. *Music Educators Journal* 85 (September): 17-22.

Guelker-Cone claims that rehearsing without accompaniment could improve choirs' sight singing, intonation, and ability to respond to conducting gestures. She recommends and identifies reasons to use movable *do* with *la*-based minor.

Hansen, Ted. 1982. *Twentieth century harmonic and melodic aural perception*. Washington, D.C.: University Press of America, Inc.

This manual covers sight singing and dictation of melodic and harmonic exercises representing twentieth-century idioms. It is for use in the fourth or fifth semester of comprehensive musicianship classes.

Harris, Clement Antrobus. 1918. The war between the fixed and movable *do*. *The Musical Quarterly* 4/2 (April): 184-195.

Harris, an advocate of movable *do*, described the history of solmization starting with Guido. He felt that fixed *do* was a misapplication of Guido's syllables to fixed pitches and that numbers were an attempt to fix a problem that fixed *do* created.

Heacox, Arthur. 1898. *Ear training: A course of systematic study for the development of the musical perception*. Philadelphia: Theodore Presser.

This ear-training book emphasizes the development of relative pitch. Heacox suggests playing melodies in a different key than the notation and focuses on the recognition of scale-steps and functional relationships. He recommends using movable *do* with *la*-based minor.

Hegyí, Erzsébet. 1975. *Solfège according to the Kodály concept*. Vol. 1. Trans. Fred Macnicol. Kecskemét: Zoltán Kodály Pedagogical Institute of Music.

Hegyí's book is an instruction manual for teachers on how to teach sight singing according to Kodály's methods for a first-year class. A new *do* position on the staff occurs in each chapter, i.e. chapter two uses *do* on C, C-flat, and C-sharp; chapter three uses *do* on F and F-sharp; and so forth. Hegyí encourages using movable *do* with *la*-based-minor, hand signs, and letter names.

_____. 1979. *Solfège according to the Kodály concept*. Vol. 2. Trans. Kata Ittész. Budapest: Editio Musica.

This instruction manual for teachers tells how to teach sight singing according to Kodály's methods and it covers advanced topics such as chords in all inversions, secondary dominants, modulations, augmented sixth chords, Neapolitan chords, modal melodies, and intervals out of tonal context. Each chapter focuses on Kodály concepts, sight singing, ear training, and musical memory.

Henderson, Robert Vladimir. 1969. Solmization syllables in musical theory 1100 to 1600. PhD diss., Columbia University.

Henderson describes solmization from 1100 to 1600 discussing the switch from hexachordal solmization to using seven syllables in order to accommodate Renaissance music.

Henke, Herbert H. 1984. The application of Émile Jacques-Dalcroze's solfège rythmique to the choral rehearsal. *The Choral Journal* 25/4 (December): 11-14.

Henke gives teaching suggestions and exercises modeling Dalcroze's method for use in choral rehearsals.

Henry, Earl and James Moberly. 1986-1987. *Musicianship: ear training, rhythmic reading, and sight singing*. Vols. 1 and 2. Englewood Cliffs, NJ: Prentice Hall.

Henry and Moberly's aural-skills textbooks present rhythms and melodies for singing and other exercises for practicing melodic, rhythmic, and harmonic dictation. They use both an intervallic and a functional approach to teaching music from the common practice period up to twentieth-century era.

Henry, Earl. 1997. *Sight singing*. Upper Saddle River, NJ: Prentice Hall.

E. Henry's sight-singing book, intended for two-year aural skills curriculums, begins with diatonic melodies and progresses to chromatic melodies, melodies that modulate, and nonfunctional and atonal melodies.

Henry, Michelle. 2004. The use of targeted pitch skills for sight singing instruction in the choral rehearsal. *Journal of Research in Music Education* 52: 206-217.

M. Henry describes her study on high school choral students in central Texas in order to determine the effects of emphasizing fifteen pitch patterns based on scale-degree and harmonic function. The results reveal that students with low and medium scores earned higher scores from pre-test to post-test, but the students with high scores earned about the same.

Henry, Michelle L. and Steven M. Demorest. 1994. Individual sight-singing achievement in successful choral ensembles. *UPDATE: Music Educators National Conference* 13/1: 4-8.

Henry and Demorest describe their investigation on the level of individual sight-singing achievement in two choirs recognized for outstanding group sight singing. One choir used fixed-*do* and the other used moveable-*do*. Results show no significant difference in sight-singing achievement between these two systems.

Herder, Ronald. 1973. *Tonal/atonal: Progressive ear training, singing, and dictation studies in diatonic, chromatic, and atonal music*. New York: Continuo Music Press.

Herder presents a graded series of singing and dictation exercises beginning with tonal examples followed by chromatic alterations of those same tonal examples, which form atonal excerpts. He begins with small intervals and progresses to larger intervals using many examples from world literature.

Hervé, Laclau. 2003. Solfège: A subject for German conservatories. *Musictheorie* 18/4: 361-372.

Hervé describes solfège as taught in German conservatories noting that relative solmization is appropriate for children, whereas fixed methods are appropriate for adults. He teaches the French fixed method to students at a German conservatory concluding that fixed solfège does not work for those students because the syllables are in a foreign language and it is too late to teach them.

Hess, Howard. 1944. A practical approach to the teaching of theory and harmony. *Volume of Proceedings of the Music Teachers' National Association* 38th series: 385-387.

Hess's approach to the teaching of theory and harmony involves an intervallic approach, e.g. he recommended using fixed *do* and the keyboard to learn intervals.

Hindemith, Paul. 1949. *Elementary training for musicians*. Rev. 2nd ed. New York: Belwin-Mills Publishing Corp.

This sight-singing and dictation book is for the first year of an ear-training class at a conservatory. All of the exercises are composed by the author; the earlier melodies focus on stepwise motion using four unique pitches (f, g, a, b) followed by diatonic exercises, chromatic exercises, and church modes. The author emphasizes learning the fixed pitch, A, and using neutral syllables.

Hollahan, Patricia Welting. 1979. Nine voices are a dime a dozen. *Music Educators Journal* 66/2 (October): 54-55.

Hollahan describes the importance of sight singing and learning correct vocal techniques for vocalists claiming that professional singers need to sight read materials with minimal errors.

Holmberg, Mark L. 1983. *Harmonic reading: An approach to chord singing*. Lanham, MD: University Press of America, Inc.

Holmberg's harmonic reading textbook is appropriate as supplemental material for a class with a firm grasp of scale-degree function, intervals, and knowledge of applied chords. In the book, Holmberg instructs students to sing arpeggios of chords downwards from the soprano down to the bass.

Holmes, Alena V. 2009. Effects of fixed-do and movable-do solfège instruction on the development of sight-singing skills in seven- and eight-year-old children. Ph.D. diss., University of Florida.

Holmes describes her research on the effects of fixed-*do*, movable-*do*, and no solfège method on the development of sight-singing skills in seven and eight year olds. The results reveal that the movable-*do* participants gained more proficiency, followed by the fixed-*do* participants, and lastly the control group gained the least proficiency.

Horacek, Leo, and Gerald Lefkoff. 1989. *Programmed ear training: Vol. I- Intervals, melody, and rhythm; Vol. II- Chords*. 2nd edition. New York: Harcourt Bruce Jovanovich, Inc.

These sight singing and dictations books are for two-year aural-skills sequences at colleges or for self-instruction. It is necessary to have a good understanding of music fundamentals before using this text because the book begins with intervals in a non-diatonic context and uses chromatic pitches in beginning-level melodies.

Horton, Jonathan David. 1974. The relative effectiveness of three systems of sight singing in developing melodic sight singing ability at the sixth grade level. Ph.D. diss., George Peabody College for Teachers.

Horton describes his research on the effectiveness of three systems of sight singing (song flute (a fixed method), shape notes (a visual method), and movable syllables) in developing sight singing skills at the sixth grade level. His results reveal no statistical difference in method used.

Houlahan, Micheál and Philip Tacka. 1990a. Sequential order for the preparation, presentation, practice and evaluation of rhythmic and melodic concepts. *Journal of Music Theory Pedagogy* 4: 243-267.

Houlahan and Tacka describe an aural skills' curriculum based on the philosophy of Kodály along with some lesson plans. The order of the topics is close to the order presented in the authors' aural-skills textbook, *Sound Thinking: Music for Sight-Singing and Ear Training*.

_____. 1990b. Sound thinking: A suggested sequence for teaching musical elements based on the philosophy of Zoltan Kodály for a college music theory course. *Journal of Music Theory Pedagogy* 4/1 (Spring): 85-109.

Houlahan and Tacka suggest a method for teaching ear training to college students based on Kodály's philosophy. They recommend teaching patterns by rote before reading from the notation and beginning with folk songs. They use movable *do* with *la*-based minor, letter names, and hand signs.

_____. 1991a. *Sound thinking: Music for sight-singing and ear training*. Vol. 1. USA: Boosey & Hawkes.

This beginning level sight-singing textbook is for one semester of study for advanced middle school students, high school students, or for a college class. Kodály's influence is evident in this textbook.

_____. 1991b. *Sound thinking: Music for sight-singing and ear training*. Vol. 2. USA: Boosey & Hawkes.

Houlahan and Tacka's Volume 2 starts with complex pentatonic melodies and continues with modal melodies, diatonic melodies, melodies outlining tonic, dominant, and subdominant triads, and melodies that modulate to closely related keys. They intend this book for a second semester of ear-training study.

_____. 1992. The Americanization of solmization: A response to the article by Timothy A. Smith, 'A comparison of pedagogical resources in solmization systems.' *Journal of Music Theory Pedagogy* 6: 137-151.

In response to T. Smith's (1992) article, Houlahan and Tacka claim that Smith is not concerned with studies on the aural development of students. The authors claim that music theorists should use solfège systems that are successful in music education such as *la*-based minor movable *do* and they provide further descriptions of *la*-based minor movable *do*.

_____. 1994. Continuing the dialogue: The potential of relative solmization for the music theory curriculum at the college level. *Journal of Music Theory Pedagogy* 8: 221-225.

This is the fourth article in a dialogue of articles between Houlahan/Tacka and T. Smith. Houlahan and Tacka describe their teaching approaches using movable *do* with *la*-based minor and the occasional use of *do*-based minor if the tonality is ambiguous.

_____. 1995. *Sound thinking: Developing musical literacy*. Vols. 1 and 2. USA: Boosey & Hawkes, Inc.

Houlahan and Tacka intend these books as resource books for teachers or as a textbook for music education students. They provide detailed teaching procedures for teaching ear-training concepts following the teaching philosophy of Kodály beginning with simple rhythmic and melodic elements and progressing through twentieth-century music.

Hughes, David W. 1991. Oral mnemonics in Korean music: Data, interpretation and a musicological application. *Bulletin of the School of Oriental and African Studies, University of London* 54/2: 307-335.

Hughes describes the use of *yukpo*, which is a nonsense vowel-pitch solfège used in Korea, Japan, Indonesia, India, and Scotland.

Hullah, John. [1842] 1983. *Wilhem's method of teaching singing (1842)*. Kilkenny, Ireland: Boethius Press.

Hullah's book presents a method based on Wilhem's *Manuel musical*, a sight-singing book known to work well with teaching fixed *do*. It is not a translation, but it is an adaptation of Wilhem's book for use in English elementary schools.

Hung, Jou-Lu. 2012. An investigation of the influence of fixed-do and movable-do solfège systems on sight-singing pitch accuracy for various levels of diatonic and chromatic complexity.” Ed. diss., The University of San Francisco.

Hung describes her research on comparing fixed-*do* and movable-*do* solfège when sight singing melodies with different levels of diatonic and chromatic complexity in college music majors who trained in either fixed or movable *do* and had piano experience before the age of twelve. Hung’s results reveal that the fixed-*do* participants had a higher level of pitch accuracy in all levels of complexity. It is important to note that Hung did not consider the sight-singing level of subjects prior to starting college.

Hutchcroft, John Carter. 1985. An analysis of college level sight singing materials published since 1960. PhD diss., The Florida State University.

Hutchcroft describes the results of his analysis of 26 sight-singing materials published between the years of 1960 to 1981 that were suitable for and oriented toward the study of sight singing in colleges and universities.

Hutton, Doris. 1953. A comparative study of two methods of teaching sight singing in the fourth grade. *Journal of Research in Music Education*. 1/2 (Autumn): 119-126.

Hutton researched the effects of teaching with and without visual materials on fourth grade students. The experimental group learned sight singing with the aid of flash cards, musical games, and music notation on slides projected on a board and the control group used very little visual materials. The results of the final exam revealed that the experimental group improved more than the control group.

Ittész, Mihály. 2004. Zoltán Kodály. *International Journal of Music Education* 22/2: 132-147.

Ittész describes the influences of Hungarian folk songs and John Curwen’s tonic *sol-fa* on Kodály and on his teaching method.

_____. 2010. Kodály, the methodologist. *Bulletin of the International Kodály Society* 35/2: 8-15.

Ittész focuses on Kodály’s teachings explaining that Kodály’s teaching method is a relative solmization system, which incorporates elements of a fixed system.

Jadassohn, Salomon. 1899. *A practical course in ear training or a guide for acquiring relative and absolute pitch for use in all schools of music, for private teachers, and for self-instruction*. Trans. LeRoy B. Campbell. New York: Breitkopf and Härtel.

Jadassohn's ear-training book emphasizes acquiring relative and absolute pitch suggesting that students memorize a pitch from a tuning fork or piano. He uses an intervallic focus throughout the text covering consonant and dissonant intervals, dyads, triads, seventh chords, secondary dominants, and dissonances not in a chord.

Jersild, Jørgen. 1966. *Ear training: Basic instruction in melody and rhythm reading*. Trans. Gerd Schiøtz. Copenhagen, Denmark: Wilhelm Hansen.

This textbook emphasizes functional listening through learning patterns rather than focusing on intervals. The book divides into three sections: the first section contains text explaining the material, the second section contains exercises composed by the author; and the third section contains a list of pieces to practice from the literature.

Johnson, Greta J. B. 1987. A descriptive study of the pitch-reading methods and the amount of time utilized to teach sight-singing by high school choral teachers in the north central region of the American choral directors association. Master's thesis, The University of Nebraska- Lincoln.

G. Johnson describes responses to a questionnaire that she sent to high school choral directors, which asked about solmization system in use and the amount of rehearsal time dedicated to sight singing. The responses reveal that the most frequently used method is intervals, followed by numbers, movable *do*, and fixed *do*.

Johnson, Marjorie Scott. 1977. A comparison of tonic orientation versus isolated interval approach to teaching pitch relations. PhD diss., The Catholic University of America.

M. Johnson's study compares a tonic-focused method to an isolated interval method when teaching sight singing and dictation. She divided the subjects into two groups of ten: the control group learned music in relation to the tonic using numbers and the experimental group learned music in relation to adjacent notes using isolated intervals. The groups performed equally well, but the tonic-focused group scored higher when identifying intervals on four out of five tests.

Johnson, Timothy A. 1990-91. Solmization in the English treatises around the turn of the seventeenth century: A break from modal theory.” *Theoria* 5: 42-60.

T. Johnson writes about solmization in England around the turn of the seventeenth century beginning with the hexachord solmization of Guido, which worked well with modal music. When that system was no longer sufficient, two other methods received popularity: William Bathe’s system that added a seventh syllable (fa) to Guido’s hexachord and the four-syllable system described by Thomas Morley, Thomas Ravenscroft, and Thomas Campion.

Jones, Evan, Matthew Shaftel, and Juan Chattah. 2014. *Aural skills in context: A comprehensive approach to sight singing, ear training, keyboard harmony, and improvisation*. New York: Oxford University.

This comprehensive aural skills book takes a functional approach and is for a two-year aural-skills class incorporating sight singing, dictation, improvisation, and keyboard skills. The melodies are from the literature ranging in styles from early music to tonal twentieth-century music.

Jones, Vincent. 1949. *Music education in the college*. Boston: C.C. Birchard & Company.

V. Jones identified various music classes taught in colleges and suggested pedagogical ideas for teaching those classes. In the aural skills section, Jones identified the goal of sight singing—to hear mentally what you see at sight—and he made a distinction between liberal arts schools and professional colleges describing the different levels of achievement desired at each and the ways of training those students.

_____. 1957. The function of sight-reading.” *Music Journal* 15/5: 18-19.

V. Jones wrote that a full appreciation of music came only through an understanding of sight-reading. He found that a functional solmization system worked well with diatonic and mildly chromatic music but favored fixed systems or an intervallic system for contemporary music.

Justus, Lane D. 1969. Developing satisfactory sight singing techniques for high school vocal students. *The Choral Journal* 9/5: 8-11.

Justus described techniques for developing sight singing in a high school choir going through topics such as a regular routine, how to address the added difficulty of text in the melodies, introduction of intervals, and selection of effective material.

_____. 1970. Evaluation of an innovative instruction design for sight singing. Ed. diss., University of Arizona.

Justus investigated high school students taught by a traditional method focused on interval training, harmonic implications, and accurate vocal production of intervals to an experimental method focused on an understanding of fundamentals, recognition of intervals, recognition of rhythmic patterns, and sight singing away from the keyboard (not by rote). He found that success occurred in students with a theoretical understanding of music.

_____. 1974. Who Says Your Singers Can't So-fa?" *The Choral Journal* 14: 9-12.

Justus distinguished between a singer (one who has no theoretical understanding) and a musician (one who has an understanding of music and can apply it) finding the musician to be the ultimate goal. In order for a teacher to develop a musician, the teacher needs knowledge about the methods and use good teaching practices.

Kaplan, Barbara. 1984. Music education in Israel. *Music Educators Journal* 70/6 (February): 57-60.

Kaplan describes music education in Israel schools (elementary through university and conservatory) focusing on methods used, majors offered, topics taught, and challenges facing teachers. The teachers primarily use fixed *do*, but recently the Kodály method gained popularity.

Karpinski, Gary S. 1988. Five recent sight singing texts. *Journal of Music Theory Pedagogy* 2/2: 275-296.

Karpinski describes five sight-singing textbooks covering the following topics in each: ordering of the concepts, solmization system(s) described and recommended, teaching philosophy of book, and types of melodies (i.e., folk, newly composed, western art music).

_____. 1989. Ear training and integrated aural skills: Three recent texts. *Journal of Music Theory Pedagogy* 3/1: 127-152.

Karpinski describes one ear-training and two integrated aural-skills books addressing the following topics in each: ordering of the material, instructions for taking dictation, and stylistic time period of the music examples.

_____. 2000a. *Aural skills acquisition: The development of listening, reading and performing skills in college-level musicians*. New York: Oxford University Press.

Karpinski describes the development of aural skills in college-level musicians and addresses various solmization systems. He references theorists who published articles and books related to the topics covered in his book throughout it.

_____. 2000b. Lessons for the past: Music theory pedagogy and the future. *Music Theory Online* 6/3: 1-6.

In the Aural Skills section of the article, Karpinski emphasizes one goal of aural skills—learning to hear and read music with understanding. He finds that aural-skills instructors ignore research concerning drilling of intervals, music perception, and cognition.

_____. 2017. *Manual for ear training and sight singing*. 2nd ed. New York: W.W. Norton & Company.

This ear-training manual accompanies Karpinski and Kram's *Anthology for sight singing* and is for a two-year aural-skills curriculum. It provides step-by-step instructions on sight singing using functional methods rather than intervallic ones and contains exercises in sight singing, keyboard, and dictation. The book begins with diatonic melodies and progresses to chromatic melodies, secondary dominants, modulation, and twentieth-century topics.

Karpinski, Gary S. and Richard Kram. 2017. *Anthology for sight singing*. 2nd ed. New York: W.W. Norton & Company.

This sight-singing anthology is for a two-year aural skills curriculum and contains all real music—the bulk of the melodies are tonal, but there is a small collection of modal and non-diatonic ones. Karpinski's *Manual for ear training and sight singing* is to accompany this book.

Killam, Rosemary N. 1988. Solmization with the Guidonian hand: A historical introduction to modal counterpoint. *Journal of Music Theory Pedagogy* 2/2 (September): 251-274.

Killam describes a method to teach modal counterpoint using the solmization system of Guido. Her students learned the Guidonian hand, they used the solmization that Guido presented of three hexachords (natural, soft, and hard), and they learned the rules of mutation.

Killian, Janice N. and Michelle L. Henry. 2005. A comparison of successful and unsuccessful strategies in individual sight singing. *Journal of Research in Music Education*. 53: 51-65.

Killian and Henry describe their research on high school students' ability to sight sing with and without a 30-second practice time of the melody and make observations about the success of various solmization systems used. The results reveal that the sight-singing system used by the participants did not yield a significant relationship with overall success, but the use of Curwen hand signs may have.

Killian, Janice. 1991. The relationship between sight-singing accuracy and error detection in junior high singers. *Journal of Research in Music Education* 39: 216-224.

This study compares the accuracy of sight singing and error detection in 75 junior high choir students. The first part of the study revealed that low-level singers scored higher when singing from syllables as opposed to notation and the second part of the study revealed that low-scoring singers were more accurate on error detection in comparison to their singing scores. The medium and high-scoring singers performed equally well on the tests.

Kliewer, Vernon L. 1973. *Music reading: A comprehensive approach*. Vols. 1 and 2. Englewood Cliffs, NJ: Prentice-Hall, Inc.

This sight-singing and dictation textbook begins with many tonal melodies and some ambiguous ones and progresses to chromatic and twentieth-century material. It is appropriate for advanced classes or for classes that follow fundamentals.

Klocko, David G. 1989. Multicultural music in the college curriculum. *Music Educators Journal* 75/5 (January): 38-41.

Klocko claims that the music curriculum at colleges should include more styles of music (such as folk music of America, folk music of the world, popular music, and world music). He thinks that a multicultural education better prepares students to teach younger students.

Klonoski, Edward. 1998. Teaching pitch internalization processes. *Journal of Music Theory Pedagogy* 12: 81-96.

Klonoski claims that one of the primary goals of ear training is to teach students to internalize pitch and pitch relationships. He describes a traditional teaching approach using only external sounds, and then describes strategies to teach pitch internalization.

_____. 2000. A perceptual learning hierarchy: An imperative for aural skills pedagogy. *College Music Symposium* 40: 168-169.

Klonoski describes the importance of using cognitive research to guide the order of concepts in an ear-training class. He uses Damschroder's *Listen and Sing* and Gottschalk and Kloekner's *Functional Harmony* books as a place to begin his discussion. He discusses topics such as intervals and the order in which chords ought to occur in an ear-training class.

Kodály, Zoltán. [1953] 1974. Who is a good musician? In *The select writings of Zoltán Kodály*, Ed. F. Bónis, 185-200. London, UK: Boosey and Hawkes.

Kodály described a good musician as one who has a good ear and one who practices.

Kosar, Anthony J. 1997. An introduction to solfège: Some preliminary ideas on an approach for teaching remedial ear training to underprepared college students. *GAMUT* 7: 31-40.

Kosar describes methods that he uses to teach sight singing to college students enrolled in a remedial ear training course at Westminster Choir College of Rider University. He presents pitch and rhythm in isolation for more than half of the semester using methods derived from Kodály's method, but he uses *do*-based minor instead of *la*-based minor.

Kreter, Leo. 1976a. *Sight and sound: A manual of aural musicianship*. Vol. 1. Edgewood Cliffs, NJ: Prentice-Hall, Inc.

Kreter's book is for the first semester of aural-skills classes covering fundamentals. Most of the exercises are composed by the author and cover predominantly diatonic music, but the chapter on intervals contains non-diatonic pitches.

_____. 1976b. *Sight and sound: A manual of aural musicianship*. Vol. 2. Edgewood Cliffs, NJ: Prentice-Hall, Inc.

Kreter intends his textbook for the end of the first year and possibly the beginning of the second year of aural-skills classes. The exercises are mostly diatonic with limited amounts of chromaticism, i.e. chromatic pitches occur in the non-harmonic tones chapter and in the modulation chapter.

Krone, Max. 1952. Music in Iran. *Music Educators Journal* 39/1 (September-October): 24-25.

Krone described music education at the conservatory, elementary, and secondary levels in Iran in addition to traditional Iranian music. He wrote that the organization of all music schools in Iran is along the French lines.

Krueger, Carol. 2017. *Progressive sight singing*. 3rd ed. New York: Oxford University Press.

Krueger's book, influenced by Kodály's method, is for a two-year ear-training sequence and it embraces the philosophy sound before symbol (rote learning).

Kuehne, Jane M. 2010. Sight-singing: Ten years of published research. *Update* 29/1: 7-14.

Kuehne presents sight-singing research published between the years of 1998 to 2008 covering topics such as sight-singing adjudication, methods and materials, strategies of successful students, assessment, effects of background noise on sight-singing ability, and harmonic and melodic influences on sight-singing success.

Kugler, Alice M. 1976. Teaching sight-reading: Sightsinging in the secondary school. *Music Educators' Journal* 62/7 (March): 69.

Kugler described the methods and books that she used for the instruction of sight singing of students in grades seven through twelve. She taught sight singing for twelve years and used two different systems, *sol-fa* syllables and numbers, finding syllables to be superior.

Lange, Richard A. and William T. Kelley. 1971. The Problem of Bias in the Writing of Elementary History Books. *The Journal of General Education* 22/4 (January): 257-267.

They describe common biases found in elementary history textbooks.

Larimer, Frances. 1991-92. Music study in the Soviet Union: Old traditions, new trends. *American Music Teacher* 41/3 (December-January): 26-31.

Larimer describes music study in the Soviet Union focusing on the similarities and differences of teaching in higher education at one of four types of schools—music college, institute, conservatory, and university.

Larson, Steve. 1992. Scale-degree function: Cognition research and its application to aural skills pedagogy.” In *CRCC Technical Report #67*. Indiana Center for Research of Concepts and Cognition. Bloomington: Indiana University Press.

Larson claims that scale-degree function is central to music cognition and music pedagogy. He supports this claim through discussions of stepwise motion and leaps; musical forces of inertia, gravity, and magnetism; and the tendencies of the scale degrees.

_____. 1993a. Scale-degree function: A theory of expressive meaning and its application to aural-skills pedagogy. *Journal of Music Theory Pedagogy* 7: 69-84.

Larson describes the musical forces of gravity, magnetism, and inertia, which help guide the perception of where tones resolve. He finds this to be an important idea for students to learn and provides sixteen ideas for how to teach students about these musical forces.

_____. 1993b. The value of cognitive models in evaluating solfège systems. *Indiana Theory Review* 14/2 (Fall): 73-116.

Larson evaluates each solmization system by counting the number of rules that each system uses and giving a rating of difficulty and accuracy for each. He concludes that *la*-based minor requires more unique syllables than *do*-based minor in select pieces of the common-practice period and stresses the importance of evaluating solmization systems by considering the educational objectives and the repertoire.

Lendvai, Ernő. 1977. *Modality: Atonality: Function*. Budapest: Institute for Culture.

Lendvai describes the use of relative solmization in Romantic works that use mode mixture and emphasize chromatic mediant relationships.

_____. 1983. *The workshop of Bartók and Kodály*. Hungary: Editio Musica Budapest.

This book provides insight into Kodály's method of solmization. In the section covering the late Romantic period, Lendvai includes an example where Kodály used parallel syllables in one of the excerpts that modulated to its parallel minor, but he also used the syllable *di* when an excerpt began in the minor mode and modulated to its parallel major.

Leonard, Charles. 1953. An easier way to read music. *Music Journal* 11/3 (March): 28, 49-55.

Leonard described the process of learning to read music beginning with rote learning in the early stages and using solmization syllables in the latter stages. He suggested using either a combination of or at least one of the following solmization systems: numbers, syllables, and letter names.

Lester, Joel. 1977. The Fux-Mattheson correspondence: An annotated translation. *Current Musicology* 24: 37-62.

Lester's article consists of a translation of a series of letters between Fux and Mattheson debating solmization systems. This was one of the first written debates over solmization systems.

Levin, Robert D. and Louis Martin. 1988a. *Sight singing & ear training through literature*. Englewood Cliffs, NJ: Prentice Hall.

Levin and Martin's aural-skills book is for a two-year study of sight singing and dictation containing melodies ranging from the 1200s to the twentieth century. The authors suggest that students should learn a fixed and a movable system with different syllables for each.

_____. 1988b. *Teacher's manual: Sight singing & ear training through literature*. Englewood Cliffs, NJ: Prentice Hall.

Levin and Martin's text provides extra resources that are not in the student's textbook with the same title. It provides dictation melodies for instructors to use in the classroom along with teaching suggestions for sight singing and dictation.

Levitin, D. J. and S. E. Rogers (2005). Absolute pitch: Perception, coding and controversies. *Trends in Cognitive Science* 9/1: 26-33.

Levitin and Rogers describe recent findings in cognitive neuroscience and cognitive psychology concerning absolute pitch. They conclude that most who acquire AP do so during a critical learning period or during a maturation stage that occurs before development of other skills, they may have a genetic disposition for AP, and some form of systematic training is necessary.

Lieberman, Maurice. 1959. *Ear training and sight singing*. New York: W.W. Norton & Company.

Lieberman's book is for two semesters of aural-skills classes; the first semester covers diatonic melodies and the second semester covers chromatic melodies and modulations. The text emphasizes both intervals and functional hearing and includes predominantly folk music.

Lloyd, Normal, Ruth Lloyd, and Jan DeGaetani. 1980. *The complete sightsinger: A stylistic and historical approach*. New York: Harper & Row Publishers.

This sight-singing book is for an aural-skills class with a good understanding of fundamentals. The literature examples occur chronologically, beginning with Medieval plainsong, followed by Renaissance music, Baroque music, Classical music, nineteenth-century music, and ending with twentieth-century music.

Lorek, Mary Jo and Randall G. Pembrook. 2000a. To doh or not to doh: The comparative effectiveness of sightsinging syllable systems. *Journal of Music Theory Pedagogy* 14: 1-14.

Lorek and Pembrook present four studies attempting to determine the most effective solmization system. They compare movable *do*, fixed *do*, and neutral syllables in studies one through three and they compare movable *do* and scale-degree numbers in their fourth study. They conclude no system is more effective.

_____. 2000b. Response to Roger's review of: 'To doh or not to doh.' *Journal of Music Theory Pedagogy* 14: 27-29.

Lorek and Pembrook respond to Rogers' criticism of their article. They agree with Rogers' point about the importance of scale-degree function, but they do not agree with the particular solmization system that Rogers suggested (movable *do*). They conclude that all systems are equally effective and that it does not matter if students use a functional system as long as they learn functional tendencies.

Lorenz, Ralph. 1995. Canon as a pedagogical tool: Applications from sixteenth-century Wittenberg. *Indiana Theory Review* 16 (Spring/Fall): 83-104.

Lorenz defines and describes canons from the sixteenth-century and explains how modern students may sight sing these. In a Josquin example, Lorenz finds that relative solmization is good because it requires fewer chromatic syllables whereas *do*-based minor requires *fi* and fixed *do* may not use the correct *ficta*. However, he thinks hexachordal solmization fits the music the best because the same syllables represent pitches at the fourth and fifth.

Lowens, Irving. 1994. John Tufts' introduction to the singing of psalm-tunes 1721-1744: The first American textbook. *Journal of Research in Music Education* 11 (Fall): 89-102.

Lowens writes about Tuft's 23-page instruction manual for singing psalm tunes; it was the first American Music Textbook.

MacKnight, Carol B. 1975. Music reading ability of beginning wind instrumentalists after melodic instruction. *Journal of Research in Music Education* 23/1 (Spring): 23-34.

MacKnight's study compares students learning wind instruments in a traditional way (learning the note names, learning the fingerings, and playing melodies using those notes) and an experimental way (learning tonal patterns, learning the fingerings, and playing melodies using those patterns). The groups played the same melodies and the experimental group scored 13 points higher in some categories.

Macpherson, Stewart and Ernest Read. 1953. *Aural culture based upon musical appreciation*. New York: Mills Music Inc.

This book contains singing exercises and instructions for teaching children how to sing following a method similar to Curwen's tonic *sol-fa* method. It uses a rote-to-note approach.

Manoff, Tom. 2001. *The Music Kit*. 4th ed. New York: W.W. Norton & Company.

This integrated text covers fundamental music skills in written music theory and aural theory.

Martin, Beverly A. 1991. Effects of hand signs, syllables, and letters on first graders' acquisition of tonal skills. *Journal of Research in Music Education* 39/2: 161-170.

B. Martin's study researches the effects of hand signs, syllables and staff notation on first graders' singing and dictation skills. She concludes that none of these methods results in increased pitch or syllable accuracy in first-grade students.

Martin, Daniel W. 1952. Do you auralize? *Journal of the Acoustical Society of America* 24/4: 416.

D. Martin thought the word audio should refer strictly to scientific ideas and preferred using the term auralize to describe the process of hearing in one's mind the mental impression of sound not yet heard.

Martin, Louis. 1978. Getting the facts straight. *Theory and Practice* 3/2 (September): 21-25.

L. Martin, a proponent of fixed *do*, gives a review against movable *do* using the opinions of faculty members at the Royal Academy of Music in London, England.

Marvin, Elizabeth West. 1995. Research on tonal perception and memory: What implications for music theory pedagogy? *Journal of Music Theory Pedagogy* 9: 31-70.

E. Marvin describes research on tonal perception and memory focusing on topics such as intervallic listening versus functional listening, tonal hierarchy and closure, and absolute pitch. She draws conclusions on effective ways to teach some of the various topics and effective ways to teach certain types of students.

Marvin, William. 2008. A comparison of four sight-singing and aural-skills textbooks: Two new approaches and two classic texts in new editions." *Journal of Music Theory Pedagogy* 22: 131-147.

W. Marvin compares four sight-sing textbooks: Carr and Benward's *Sight Singing Complete*, Karpinski and Kram's *Anthology for Sight Singing*, Krueger's *Progressive Sight Singing*, and Ottman and Rogers' *Music for Sight Singing*. He looks at the pedagogical approaches of each, the sequencing of materials, and other features. He notes that they all claim not to adhere to one solmization system, but they all have a bias.

Mason, Lowell. 1838. *Manual of the Boston academy of music: For instruction in the elements of vocal music, on the system of Pestalozzi*. Boston: J.H. Wilkins & R.B. Carter.

Mason described his preferred method to teach singing modeled on Pestalozzi ideas. When sight singing, he taught relative movable *do*, but when he spoke about music, he suggested the use of numbers.

May, John Amos. 1993. A description of current practices in the teaching of choral melody reading in the high schools of Texas." Ed. diss., University of Houston.

May describes his survey completed by high school choral directors in Texas asking about the solmization system used, amount of time spent sight singing, and the materials used to practice sight singing. Most used movable *do* and a majority of those used *la*-based minor.

McClung, Alan C. 2001. Sight-singing systems: Current practice and survey of all-state choristers. *Update: Applications of Research in Music Education* 20/1: 3-8.

McClung describes his survey of 2,115 senior high all-state choruses in six southeastern states asking in which sight-singing system they received the most instruction. Pitch numbers was the most popular at 58%, then movable *do* at 19%, followed by neutral syllables at 13%, other at 6%, and fixed *do* at 4%.

_____. 2008. Sight-singing scores of high school choristers with extensive training in movable solfège syllables and Curwen hand signs." *Journal of Research in Music Education* 56/3 (October): 255-266.

In McClung's study, high school students with extensive training in solfège syllables and Curwen hand signs (N = 38) sight sang two melodies, one while using Curwen hand signs and the other without. Out of a perfect score of 16, the mean score with hand signs was 10.37, and without hand signs, 10.84.

McGaughey, Janet McLoud. 1961. *Practical ear training*. Boston: Allyn and Bacon Inc.

This sight-singing and dictation textbook uses music from a variety of periods and starts with diatonic and modal music followed by chromatic chords and modulation. It is appropriate for advanced classes with a firm grasp of fundamentals and accidentals because non-diatonic pitches occur early in the text.

McHose, Allen Irvine and Ruth Northup Tibbs. 1945. *Sight-singing manual*. 2nd ed. New York: Appleton-Century-Crofts Inc.

This manual is appropriate for an ear training class at a conservatory or for a class with a firm grasp of fundamentals of music. The authors recommend the use of a fixed solmization system when singing melodies in their manual, which are from the eighteenth, nineteenth, and twentieth centuries.

McNaught, W.G. 1892-93. The history and uses of the sol-fa syllables. *Proceedings of the Musical Association* 19th Session: 35-51.

McNaught wrote about the history of solmization beginning with Guido and going through the present times. His main thesis focused on the importance of using both fixed and movable systems with different syllables for each.

Middleton, James A. 1984. Develop choral reading skills. *Music Educators Journal* 70/7 (March): 29-32.

Middleton identifies basic skills needed for music literacy: rhythm and pitch accuracy. He describes rhythmic counting systems and the benefits of fixed *do* (a system that he recognizes as the ideal solmization system for achieving pitch accuracy).

Miller, Charles H. 1930. Teaching sight reading without syllables: The Rochester plan. *Music Supervisors' Journal* 17/1 (Oct.): 18-19.

Miller described a new method of teaching sight singing called the Rochester plan. This method was a mixture of functional and intervallic approaches that used the text of the songs rather than solmization syllables.

Miyazaki, K. and Y. Ogawa (2006). Learning absolute pitch by children: A cross-sectional study. *Music Perception* 24: 63-78.

Miyazaki and Ogawa describe their research on absolute pitch in children from ages four through ten who learned fixed *do* at a private music school in Tokyo; all of the children began training at age four at the school. The results reveal that children learn white-keyed notes first followed by black keys (the order they occurred in their lessons) and that from ages four to seven, children make vast improvement in their scores for absolute pitch.

Montani, Nicola A. 1931. *Essentials in sight singing: A modern method of solfeggio (solfège or sol-fa)*. Books I and II. Boston: C.C. Birchard & Company.

This fundamentals sight-singing book contains western art music and newly composed pieces and covers topics such as intervals, major and minor diatonic music, chromatic scale, augmented triad, whole tone scale, and modes. Relative movable *do* and relative scale-degree numbers occur throughout the text.

More, Bruce E. 1985. Sight singing and ear training at the university level: A case for the use of Kodály's system of relative solmization. *The Choral Journal* 25/7 (March): 9-11, 13-18, 21-22.

More's article begins with an overview of sight-singing systems starting from Guido to modern times. The latter part of his article explains Kodály's system of relative solmization and encourages its use in universities.

Multer, Walt. 1978. Solmization and musical perception. *Theory and Practice* 3/1 (February): 29-51.

Multer, an advocate of fixed *do*, gives a detailed description of teaching fixed *do*, then he compares fixed *do* to movable *do*, and concludes that fixed *do* is a better system when singing atonal music.

Murphy, Howard Ansley. 1950. *Teaching musicianship; A manual of methods and materials*. New York: Coleman-Ross Company.

Murphy addressed particular claims made about various solmization systems and concluded that too much time was spent learning syllables. He felt that numbers, letters, and neutral syllables were better systems than movable and fixed *do*.

Murphy, Paul, Joel Phillips, Elizabeth West Marvin, Jane Piper Clendinning. 2016a. *The musician's guide to aural skills: Ear training*. 3rd ed. New York: W.W. Norton & Company.

This ear-training textbook includes dictation and composition practice and has two companion textbooks: *The Musician's Guide to Aural Skills: Sight Singing* and *The Musician's Guide to Theory and Analysis* by the same authors.

_____. 2016b. *The musician's guide to aural skills: Sight singing*. 3rd ed. New York: W.W. Norton & Company.

This sight-singing textbook is for two-year aural-skills classes. Many of the excerpts are newly composed but others are folk, common-practice period, popular music, twentieth- and twenty-first century art music. The authors encourage the use of movable *do* or scale-degree numbers for tonal pieces and a fixed integer system for highly chromatic and atonal melodies.

Myers, Gerald C. 2008. Sight-singing instruction in the undergraduate choral ensembles of colleges and universities in the southern division of the American choral directors association: Teacher preparation, pedagogical practices and assessed results. DMA diss., The University of North Carolina at Greensboro.

Myers describes a survey that he sent to college or university choral conductors asking about demographics and questions pertaining to the importance of sight singing and identification of the solfège system(s) used in collegiate choirs.

Nemes, Klára. 1995. The relative sol-fa as a tool of developing musical thinking. *Bulletin of the International Kodály Society* 20/2: 27-34.

Nemes traces the history of solmization claiming that relative solmization encourages the development of musical thinking, helps students sing better in tune, and helps to develop functional hearing.

Ottman, Robert W. 1956. A statistical investigation of the influence of selected factors on the skill of sight-singing. PhD diss., North Texas State College.

Ottman researched the effects of selected factors on the sight-singing skills of college students enrolled in Theory IV at North Texas State College using standardized tests, original tests, and then did an analysis of the results. He discovered there was a correlation between the topics of error detection, melodic dictation, melodic modulation, tonic memory, and aural interval recognition to the ability of sight singing.

_____. 1981. *More Music for Sight Singing*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Ottman wrote *More Music for Sight Singing* for use with his book, *Music for Sight Singing*. This book presents rhythmic exercises, three sections of newly composed exercises, and melodies from the literature representing a variety of periods including Renaissance, Medieval, common-practice period, twentieth century, folk, and world music.

Ottman, Robert W. and Nancy Rogers. 2014. *Music for Sight Singing*. 9th ed. Boston: Pearson.

Ottman and Rogers' sight-singing book is for a two-year aural-skills curriculum and it uses a functional approach. The melodies are predominantly folk beginning with basic diatonic melodies, followed by chromatic melodies, modulations, and twentieth and twenty-first century melodies.

Ozeas, Natalie Laird. 1991. The effect of the use of a computer assisted drill program on the aural skill development of students in beginning solfege (interval identification and sight singing). Ed. diss., University of Pittsburgh.

Ozeas describes her research on the effects of the use of a computer-assisted drill program on the ability of students to sing and identify intervals. She concludes that class instruction is more beneficial for weaker singers rather than computer-assisted drill.

Page, Christopher, William Weber, Jean Gribenski, David Hiley, Carolyn Gianturco, Howard E. Smither, and Peter Dickinson. Universities. In *Oxford Music Online*. (accessed June 26, 2018).

They describe the role of universities from the middle ages to the 1990s.

Pembroke, Randall G. and H. Lee Riggins. 1990. 'Send help!': Aural skills instruction in U.S. colleges and universities. *Journal of Music Theory Pedagogy* 4/2 (Fall): 231-241.

Pembroke and Riggins describe the results of a survey they sent to 908 colleges and universities in the United States and Canada asking questions about sight singing. Their results reveal that most schools use scale-degree numbers, but their results were possibly faulty because instructors identified systems they used, not what they preferred.

Phillips, Kenneth. 1984. Sight singing: Where have we been? Where are we going? *The Choral Journal* 24/6 (February): 11-17.

Phillips describes a history of sight singing. He begins with Guido's hexachord, followed by Rev. John Tufts' fasola method, the Mason brothers' seven syllable system, the conflict of movable *do* and fixed *do* in the nineteenth century, the changed teaching philosophy of rote learning in the early twentieth century, and concluded with the main methods taught in grade schools today: Kodály, Orff-Schulwerk, and Jacques-Dalcroze.

_____. 1996. Teaching Singers to Sight-Read. *Teaching Music* 3/16 (June): 32-33.

Phillips notes that due to rote learning, children lack sight-singing skills. He desires a method that combines instructions for pitch production and note reading. He suggests that teachers follow the Kodály method as described in Choksy's *The Kodály Method* and Gordon and Woods' method as described in *Jump Right In: The Music Curriculum*.

Potter, Gary. 1990. Identifying successful dictation strategies. *Journal of Music Theory Pedagogy* 4: 63-71.

Potter's study identifies successful dictation strategies. His study uses techniques of a naturalistic inquiry meaning that the study occurred in its natural setting where participants offered insight into their own data, people interpreted the data, biases could inform the results, qualitative methods could occur, and there was purposeful selection in the test subjects. His results reveal that scale-degree thinking is more beneficial than interval recognition.

Pratt, George. 1998. *Aural awareness: Principles and practice*. Rev. ed. New York: Oxford University Press.

In the sight-singing portion, Pratt suggests some unconventional ways to practice sight singing. His method does not involve a solmization system and does not appear biased towards any approach. He suggests silent reading, gives ideas for playing by ear, and discusses strategies for memorization.

Pritzker, Maya. 1991. The music education system in the USSR. *American Music Teacher* 41/1 (August-September): 18-20, 62-64.

Pritzker describes music education in the Soviet Union at various age levels including children's music schools, music colleges, institutes, and conservatories. She focuses on years of study required at each, types of students at each, the music curriculum, and the jobs that students qualified for after they graduate.

Rainbow, Bernarr. 1967. *The land without music: Musical education in England, 1800-1860 and its continental antecedents*. London: Novello and Company Limited.

Rainbow describes various influences on music teaching in England including Sarah Glover, Jean-Jacques Rousseau, Pestalozzi, James Kay, John Hullah, John Curwen, among others.

_____. 1980. Curwen's visit to Norwich. *The Musical Times* 121/1646 (April): 233, 235-236.

Rainbow describes Curwen's success with Glover's *sol-fa* method, his visit to her at Norwich, his suggestions for altering her method, and her refusal to change it.

_____. 2001. Galin-Paris-Chev  system. In *Oxford Music Online*. (accessed September 27, 2017).

The Galin-Paris-Chev  system is a French system of teaching sight singing. It uses a number-notation system introduced by Rousseau in 1742, which used the numbers *one* to *seven* to refer to scale-degree numbers, but used *sol-fa* syllables when singing.

Rainbow, Bernarr and Piers Spencer. Tonic sol-fa. In *Oxford Music Online*. (accessed September 27, 2017).

Rainbow and Spencer provide the history of tonic *sol-fa* from S. Glover to J. Curwen to modern times.

Randall, J. K. 1972. Two lectures to scientists, I: Theories of musical structure as a source for problems in psycho-acoustic research. In *Perspectives on contemporary music theory*, Eds. B. Boretz and E.T. Cone, 116-122. New York: W.W. Norton & Company.

Randall explains problems that scientists in psycho-acoustical research may come across in music and suggests that they should collaborate with a musician in order to do good research. One of those problems is that context can affect intervallic sizes in music and Randall explains how an understanding of the musical structure can help with interpretation.

Randel, Don Michael, ed. 2001. *The new Harvard dictionary of music*. Cambridge: The Belknap Press of Harvard University Press.

This is a dictionary of musical terms.

Rawlins, Robert. 2005-06. Sight singing for instrumentalists. *The American Music Teacher*. (December/ January): 26-29.

Rawlins describes the importance of using any solmization system and gives further explanations of fixed *do* and movable *do* (*do*-based and *la*-based minor). He focuses on the advantages of fixed *do* and the disadvantages of movable systems.

Reifinger, James L., Jr. 2012. The acquisition of sight-singing skills in second-grade general music: Effects of using solfège and of relating tonal patterns to songs. *Journal of Research in Music Education* 60/1: 26-42.

Reifinger describes a study of his, which tested second-grade students enrolled in general music in the northeast to see if learning solfège and tonal patterns affected their ability to sight sing. The results show that of the four groups of students (of which two groups learned solfège and two sang on loo), those who learned solfège sang familiar patterns better, but those who learned loo sang unfamiliar patterns better.

Robichaux, Emile and Richard J. Elliot. 1973. ABC or DO RE MI. *The School Musician, Director, and Teacher* (February): 44-45.

Robichaux and Elliot describe their research on the most effective solmization system (letter names or movable *do* syllables). Two groups of eighteen girls learned the exact same melodies using different solfège systems over a period of 5.5 months. The scores of the movable *do* group was higher than the letter name group, but the results indicated statistically there was no difference.

Robinson, Ray and Allen Winold. 1976. *The choral experience: Literature, materials, and methods*. Prospect Heights, IL: Waveland Press, Inc.

In the chapter on pitch, Robinson and Winold write about methods for pitch discrimination. The methods commonly used are rote learning, absolute pitch, pitch function, intervals, and pitch patterns. The authors recommend the use of a combination of solmization systems when learning these methods.

Roe, Paul. 1970. *Choral music education*. Englewood Cliffs, NJ: Prentice Hall Inc.

Roe writes about the various methods of teaching sight singing to elementary students, but claims the methods applied to older students as well. The primary methods recommended are fixed and movable methods as well as neutral syllables, which is Roe's preference.

Rogers, Michael R. 1983. Beyond intervals: The teaching of tonal hearing. *Indiana Theory Review* 6/3 (Spring): 18-34.

Rogers thinks that there is too much emphasis was on intervallic hearing. He claims that identical intervals sound different depending upon their function, mastery of intervals is not necessary before singing tonal melodies, and thinking functionally is more musical.

_____. 1996. The Jersild approach: A sightsinging method from Denmark. *College Music Symposium* 36: 149-161.

Rogers' describes the Jersild approach, which is a system that emphasizes function by teaching tonal patterns. It does not indicate a specific solmization system, but Rogers suggests either movable *do* with *do*-based minor or numbers because they reinforce the scale-degree functions.

_____. 1997. Foreward. In *Sight Singing*, author Early Henry, xiii-xix. Upper Saddle River, NJ: Prentice Hall.

Rogers writes about the goals of sight singing, methods for practicing sight singing, and the solmization systems of fixed *do*, movable *do* (with *la*- and *do*-based minor), numbers, and letter names.

_____. 2000. Review of 'To doh or not to doh.' *Journal of Music Theory Pedagogy* 14: 15-25.

Rogers responds to and criticizes an article of Lorek and Pembroke's titled "To Doh or Not to Doh". Rogers identifies design flaws with their study—a flaw he notes is that they compare systems with different goals using the exact same melodies. He suggests they need to understand the goals of sight singing and to use a different design for a study that takes those goals into account.

_____. 2004. *Teaching approaches in music theory: An overview of pedagogical philosophies*. 2nd ed. Carbondale: Southern Illinois University Press.

Rogers' book provides insight into the teaching approaches of music theory and ear training. In the sight-singing portion, Rogers describes the strengths and weaknesses of certain solmization systems and he writes about some problems in textbooks, e.g. most do not teach structural hearing.

Rogers, Nancy. 2007. Solmization expertise coordinates with superior pitch memory. *Pauta* 18/30 (January): 131-152.

N. Rogers describes her research that tested students to see if there was a correlation between movable-*do* solfège and pitch memory. The test subjects, University of Iowa students enrolled in Musicianship and Theory III, heard paired sequences of pitches separated by an interference of sound and identified the sequences as the same or different. Rogers concludes that students remember pitch patterns through verbal encoding meaning that movable *do* is beneficial in identifying and recognizing patterns.

Royse, David, Akosua Obuo Addo, Rita Klinger, Peter Dunbar-Hall, and Patricia Shehan Campbell. 1999. Comparing music training practices around the world. *Journal of Music Teacher Education* 8/2 (Spring): 14-20.

This article describes music training around the world showing that the cultural values of an area affect their approaches. For example, music studies at universities and conservatories in Japan, Korea, and China focus on performance rather than teacher training because music teaching is a low-level career in those countries.

Saltzer, Felix. 1962. *Structural hearing: Tonal coherence in music*. Vol. 1. New York: Dover Publications, Inc.

Saltzer described tonal music to be the language of music from the thirteenth through the early twentieth centuries, but later music did not follow the rules. He thought that whether music changed direction or continued to be primarily tonal, that it was important to teach the perception of all music.

Santos, Regina A. T. and Luciana Del-Ben. 2010. Quantitative and qualitative assessment of solfège in a Brazilian higher education context. *International Journal of Music Education* 28/1: 31-46.

The authors have adapted Davidson, Scripp, and Meyard's assessment criteria for solfège to Brazilian undergraduate students. They find that qualitative assessment more accurately provides reliable assessment of the students' skill levels and desire adding rhythmic aspects to the assessment.

Sarath, Edward W., David E. Myers, and Patricia Shehan Campbell. 2017. *Redefining music studies in an age of change: Creativity, diversity, and integration*. New York: Routledge.

The authors find that the traditional curriculum, which largely consists of European common-practice music, ought to be different for the twenty-first-century musician. They suggest introducing world music and contemporary music along with other changes to the music curriculum at colleges including improvisation, composition, and others.

Schenker, Heinrich. 1969. *Five Graphic Music Analyses*. New York: Dover Publications, Inc.

This book contains Schenker's analysis of five pieces: two by J.S. Bach, one by Haydn, and two by Chopin.

_____. [1935] 1979. *Free Composition*. Trans. and Ed. Ernst Oster. New York: Schirmer Books.

This book is an English translation of Schenker's *Der frei Satz*, which is the third volume of a larger work titled *Neue musikalische Theorien und Phantasien*. In this text, Schenker presents his ideas on voice-leading and structural levels.

Schultz, Willard. 1993. Music north of the border. *American Music Teacher* 42/4 (February/March): 22-25, 77-78.

Willard describes music education in Canada and claims it often paralleled music education in the United States.

Schuyler, Philip D. 1979. Music education in Morocco: Three models. *The World of Music* 21/3: 19-35.

Schuyler describes three models of music education found in Morocco—divine inspiration (self-taught), apprenticeship to a master musician, and formal instruction at a conservatory. He finds that the conservatory system resembles apprenticeship towards the latter part of students' studies and that many performance-oriented students ignore solfège.

Scott, Thomas More. 1995. Sight-singing in the college-level choral program. *The American Organist* 20: 68-71.

Scott emphasizes the importance of teaching sight singing to choirs. He thinks that some students struggle with sight reading because of rote learning and because of their aptitude for sight reading because they did not have enough exposure to music before age nine citing research of C. Seashore and E. Gordon.

Seashore, Carl E. 1976. *Psychology of Music*. New York: Dover Publications, Inc.

This is the standard book for psychologists specializing in music. It covers topics such as the musical mind, absolute pitch acquisition, and development of musical skills, among others.

Seashore, Harold. 1936. An objective analysis of artistic singing. In *Studies in the psychology of music*. Vol. 4. Iowa City, IA: The University Press.

This study used quantitative methods to interpret artistic singing by observing pitch, intensity, rhythm, and phrasing in eight singers. In pitch, Seashore observed errors in intonation; the average mean for 20% of the tones were within .1 of a tonal step and the other pitches were greater than .1 of a tonal step. He concluded that the ear is tolerant of these pitches and that if intervals were the goal, performances would be lifeless and mechanical.

Seward, Theodore F. and B.C. Unseld. 1880. *The tonic sol-fa music reader: A course of instruction and practice in the tonic sol-fa method of teaching singing, with a choice collection of music suitable for day schools and singing schools*. New York: Biglow & Main Publishers.

This book (influenced by Curwen's tonic *sol-fa* system) was for singing schools and day schools. It uses hand signs for pitches and rhythms, a rhythmic notation that does not require staff notation, and a modulator chart.

Shaw, H. Watkins. 1950-51. The teachings of John Curwen. *Proceedings of the Royal Music Association*, 77th sess.: 17-26.

Watkins described the influences and teaching approaches of Curwen.

Shepard, Roger N. and Daniel S. Jordan. 1984. Auditory illusions demonstrating that tones are assimilated to an internalized musical scale. *Science, New Series* 226/4680 (Dec.): 1333-1334.

Shepard and Jordan describe a study concerning the perception of pitch. The authors stretched an eight-tone scale so that the final note was a half step too high. Subjects heard the stretched scale, followed by a pitch, and had to identify if the original starting note of the scale was the same, higher, or lower in comparison to that of the sounded pitch. Most students responded that the pitch was lower even though it was the same starting pitch.

Shumway, Stanley. 1980. *Harmony and ear training at the keyboard*. 3rd ed. Dubuque, IA: Wm. C. Brown Publishing Company.

This book is for a keyboard harmony class that has good knowledge of the fundamentals of music—rhythm, scales, key signatures, and intervals. The exercises begin with diatonic chords and progress to twentieth-century idioms.

Siler, Henry. 1956. Toward an international solfeggio. *Journal of Research in Music Education* 4/1 (Spring): 40-43.

Siler proposed a fixed-*do* system that accommodated up to double flats and double sharps. Sharps changed the vowel to e, flats changed the vowel to o, double sharps changed the vowel to i, and double flats changed the vowel to u. The proposed syllables for a C Scale were *da-ra-ma-fa-sa-la-ta*.

Silvey, Clel T. 1937. Solmization in music reading. *Music Educators Journal* 24/2: 21-22.

Silvey sent surveys to high schools, colleges, church choirs, and municipal organizations asking them to rate solmization plus six other factors, which may aid music reading. Only 31 percent felt solmization aided music reading. Silvey concluded that solmization was not useful to the majority of students and that students should not use it.

Simpson, Kenneth, ed. 1981. Some controversies about sight-singing. In *Some great music educators: A collection of essays*, 107-122. Borough Green, Kent, Great Britain: Novello & Company.

Simpson describes the mental effects of the notes, controversies between fixed and movable *do*, and controversies between *do*-based minor and *la*-based minor. He finds that the minor mode is not separate from the major preferring *la*-based minor movable *do*.

Smith, Kathryn. 1994. Shape-notes: Historical perspective and reflections on an early American solfège tradition. *Bulletin of the International Kodály Society* 19/2: 30-40.

K. Smith briefly discusses the influence England has had on music in America and then focuses on the influence of shape-notes on solfège in America. Smith thinks that Kodály would have approved of the shape-note tradition and claims that if the shape-notes had continued, students would succeed more in singing.

Smith, Melville. 1934. Solfège: An essential in musicianship. *Music Supervisors' Journal* 20/5 (May): 16-17, 58, 60-61.

M. Smith described musicianship, how to attain musicianship, his ideal solmization system (fixed system), and then gave a summary of the topics taught in ear-training classes. He drew parallels between language acquisition and learning music believing music training should occur at a young age.

Smith, Susan A. 1998. Sight singing in the high school choral rehearsal: Pedagogical practices, teacher attitudes and university preparation. PhD diss., The Florida State University.

S. Smith describes a survey that she sent to choral directors of ninth and tenth grade students inquiring about pedagogical practices, attitudes of sight singing, perception of ability, experience, and preparation. The sight-singing methods most frequently used were movable *do* with *la*-based minor, intervals by singing a familiar tune, and scale-degree numbers.

Smith, Timothy A. 1987. Solmization: A tonic for healthy musicianship. *The Choral Journal* 28/1 (August): 16-23.

T. Smith presents arguments in favor of movable *do* with *do*-based minor (rather than fixed *do* or *la*-based minor) and explains why *do*-based minor is applicable for chromatic and atonal music.

_____. 1991. A comparison of pedagogical resources in solmization systems. *Journal of Music Theory Pedagogy* 5/1 (Spring): 1-23.

T. Smith identifies strengths and weaknesses of various solmization systems such as fixed *do*, movable *do* (both *la*-based minor and *do*-based minor), and numbers. He favors *do*-based minor because it aids functional listening.

_____. 1992. Liberation of solmization: Searching for common ground. *Journal of Music Theory* 6: 153-168.

This is the third article in a series of articles by Houlahan/Tacka and Smith. Smith argues that *do*-tonic is a better system and he presents criticisms of *la*-based minor: *la*-based minor is more complex when singing secondary dominant chords, analysis is necessary in *la*-based minor, and two languages occur when singing *do*-major and *la*-based minor syllables.

_____. 1994. Ending the dialogue: Imaginary solutions are no solution. *Journal of Music Theory* 8: 227-230.

This is the fifth article in a series of articles by Houlahan/Tacka and Smith. Smith reiterates his belief that *do*-tonic is oriented more toward the ear than *la*-based minor.

Spohn, Charles L. and William Poland. 1963. An evaluation of two methods using magnetic tape recordings for programmed instruction in the elemental materials of music. *Report of Title VII*, Project number 876, NDE Act of 1958, The Ohio State Research Foundation.

Spohn and Poland researched the perception of intervals. Their results revealed that, from easy to difficult, the order is perfect octave, major second, minor second, major third, perfect fourth, perfect fifth, major sixth, major seventh, minor third, tritone, minor seventh, and minor sixth.

Stebleton, Eloise. 1987. Predictors of sight-reading achievement: A review of literature. *Update: Applications of Research in Music Education* 6/1: 11-15.

Stebleton writes about various studies that identify characteristics of those who sight-read well. These characteristics consist of students with good keyboard skills, those with a high IQ, those who read rhythms well, and those who look at groups of notes rather than note-by-note, and those who recognize melodic and rhythmic patterns.

Steckman, Harry Martin. 1979. The development and trial of a college course in music literacy based upon the Kodály method. Ed. diss., University of Illinois at Urbana-Champaign.

Steckman compares two groups of freshman enrolled in music at Triton College—one group learned according to a traditional approach using movable *do* with *do*-based minor and the other group instructed according to a Kodály approach. The groups used music materials appropriate for each approach and the materials were different between the two. The results reveal that the scores between the two sections were not statistically different.

Steele, Janet and Bonney McDowell. 1982. *Elementary musicianship: An introduction to theory, sight-singing, and ear training*. New York: Alfred A. Knopf, Inc.

This textbook is appropriate for a fundamental music class studying theory, sight singing, and ear training. It begins by using graph notation for rhythm and pitch before introducing real notation and uses scale-degree numbers at various places in the book.

Stevenson, John R. and Marjorie S. Porterfield. 1986. *Rhythm and pitch: An integrated approach to sight-singing*. Upper Saddle River, NJ: Prentice-Hall, Inc.

Stevenson and Porterfield's textbook is for use in two-year ear-training courses, but it needs supplementary material if the instructor wants to include twentieth-century music. There is a focus on both fixed methods (as seen in the emphasis on intervals and clef reading) and movable methods (as seen by listing scale-degree numbers and using harmonic approaches such as tonal patterns).

Strunk, Oliver and Leo Treitler, eds. 1998. Guido of Arezzo: Epistle concerning an unknown chant. In *Source readings in music history*, 214-218. Rev. ed. New York: W.W. Norton & Company.

The editors present Guido's letter describing the origins of his solmization system and telling the story of how he taught boys to sing an unknown melody at sight in three days.

Surace, Joseph. 1978. 'Transposable do' for teaching aural recognition of diatonic intervals. *Theory and Practice* 3/2 (September): 25-27.

Surace writes that diatonic intervals should be taught between specific scale degrees when first taught i.e., the minor second taught is *ti-do*; the major second taught is *do-re*; etc. One problem with his approach is that intervals sound different depending upon the context.

Szönyi, Erzsébet, John Weissman, and Raymond Alson. 1973. *Kodály's principles in practice: An approach to music education through the Kodály method*. New York: Boosey & Hawkes.

Szönyi describes Kodály's method and its influence on music education. For children, Kodály's method begins with folk music of the home country followed by folk music of other countries. For older people, songs that correspond to their age group should occur.

Taggart, Bruce. 1997. Sight singing Schubert: A study in solfège. *Journal of Music Theory Pedagogy* 11: 75-98.

Taggart compares the strengths and weaknesses of *la*-based minor and *do*-based minor when singing two Schubert songs. He finds that *do*-based minor expresses harmonic structures and melodic function better and that it works well when modulating between keys with a parallel relationship. He finds that *la*-based minor allows him to hear interval relationships and scale functions more easily, but he thinks neither works well for certain modulations.

Taggart, Cynthia Crump and Bruce F. Taggart. 1994. Sight singing systems: A survey of American colleges and universities. *Southeastern Journal of Music Education* 6: 194-209.

Taggart and Taggart describe a survey they sent to one quarter of four-year music degree-granting institutions listed in *College Music Society's Directory of Music Faculties in Colleges and Universities, US and Canada* (1990-1992). Their responses reveal that in schools where aural skills occur in separate classes from music theory classes, instructors use movable *do* with *la*-based minor more frequently, followed by movable *do* with *do*-based minor, and then by numbers. In schools where aural skills occur in integrated classes (both aural skills and music theory), movable *do* with *do*-based minor occurs more frequently, followed by numbers, and movable *do* with *la*-based minor.

Takeuchi, Annie H. and Steward H. Hulse. 1993. Absolute pitch. *Psychological Bulletin* 113/2: 345-361.

The authors present a survey on the literature of absolute pitch.

Taylor, John. 1896-97. The evolution of movable *do*. *Proceedings of the Musical Association, 23rd Session*: 17-35.

Taylor traced the development of movable *do* from Medieval times to modern times. He preferred *la*-based minor, but he used *do*-based minor for music written around the seventeenth century and later if it modulated between a major key and its parallel minor.

Telesco, Paula. 1991. Contextual ear training. *Journal of Music Theory Pedagogy* 5/1 (Spring): 179-190.

Telesco describes teaching methods that she finds successful when teaching ear training. She finds that movable-*do* with *do*-based minor shares her goal of students learning to hear functional relationships.

Thackray, Rupert. 1978. *Aural awakening: A course of aural training and general musicianship for students and teachers*. Shenton Park, The University of Western Australia: CIRCME.

Thackray's book is for first year classes of aural skills at colleges or secondary schools. In addition to focusing on pitch and rhythm, the text introduces the topics of form, timbre, texture, dynamics, articulation, analysis, keyboard skills, among others. Thackray recommends using a movable system.

Thompson, Kathy A. 2004. Thinking in sound: A qualitative study of metaphors for pitch perfection. *Journal of Music Theory Pedagogy* 18/1: 81-107.

Thompson describes her research on successful and unsuccessful strategies used in sight singing and identifies five strategies that students use: the follower, the button-pusher, the contour-singer, the tonal-thinker, and the builder. The most successful students in her study used functional (tonal thinker) and intervallic (builder) thinking.

Thomson, William. 1975. *Advanced music reading*. Champaign, IL: Crouse Printing.

Thomson's sight-singing book is for an advanced-ear training class. It begins with large leaps in diatonic melodies, followed by chromatics, modulations, ambiguous tonalities, advanced rhythmic concepts, among others. A majority of the excerpts are from the Romantic era and the twentieth century.

_____. 1981. *Introduction to music reading: Concepts and application*. 2nd ed. Belmont, CA: Wadsworth Publishing Company.

Thomson's sight-singing book is for fundamentals classes or first year ear-training classes at a college. It begins with diatonic melodies and progresses to chromatics, modal melodies, and modulation to closely-related keys. Thomson recommends using functional syllables in order to reinforce a sense of pitch relations but cautions against using them for too long recommending neutral syllables.

_____. 1988. What is an interval? *Journal of Music Theory Pedagogy* 2/2 (Fall): 321-324.

Thomson claims that intervals sound different based on context and claims that instructors should not base their teaching of music entirely on learning intervals.

Tovey, Donald Francis. 1938. Introduction. In *Essays in musical analysis*, 1-19. Vol. 1. New York: Oxford University Press.

Tovey addressed keys and key relationships in his introduction. He acknowledged that tonic *sol-fa* emphasized a local tonality, but criticized it for not emphasizing a larger grasp of tonality.

Trainor, L. J. (2005). Are there critical periods for music development? *Developmental Psychobiology* 46: 262-278.

Trainor describes his research of critical periods for music development covering topics such as absolute pitch versus relative pitch, consonance and dissonance, scales, and harmony. Concerning absolute pitch, he concludes that students will acquire absolute pitch with these two conditions met: students receive musical training (or an appropriate experience) during a critical period and they have a genetic disposition for AP.

Trubitt, Allen R. and Robert Stephan Hines. 1979. *Ear training and sight-singing: An integrated approach*. New York: Schirmer Books.

Trubitt and Hines' book is for a first year aural-skills class. It introduces modal music early in the book using predominantly newly composed exercises. The topics covered begin with intervals progressing from small to large, major and minor scales, chords, modes, and conclude with the pentatonic scale.

Tucker, David Walter. 1969. Factors related to musical reading ability of senior high school students participating in choral groups. Ed. diss., University of California, Berkeley.

Tucker tested tenth through twelfth grade choral students in order to determine factors related to sight-reading ability. He found correlation between sight-singing ability and pitch discrimination, notational discrimination, musical signs, melodic memory, and chord analysis, but not with years of choir experience.

Walker, Alfred. 1935. Sight singing in our schools—Can it be improved? *Music Educators Journal* 15 (February): 15.

Walker thought that Curwen's method as taught in Britain achieved more success than the teaching of movable *do* in America because British children learned to read from syllables before reading from staff notation unlike American children who learned to read directly from the staff.

Walton, Charles W. and Harry Robert Wilson. 1966. *Music reading through singing: A vocal approach to musical understanding*. Belmont, CA: Wadsworth Publishing Company, Inc.

This sight-singing book is for one or two semesters of sight-singing study at colleges and universities. It uses a functional approach and covers diatonic music, intervals, and modulation to closely-related keys using predominantly folk music.

Warner, Elinor. 1957. Re: Music reading reconsidered as a code-learning problem. *Journal of Music Theory* 1/2: 205-208.

Warner responded to Fletcher's article: "Music Reading Reconsidered as a Code-Learning Problem." Warner thought that the analogy Fletcher made between learning to read the English language and learning to read music needed to be changed.

Weber, William, Denis Arnold, Cynthia M. Gessele, Peter Cahn, Robert W. Oldani, and Janet Ritterman. Conservatories. In *Oxford Music Online*. (accessed June 26, 2018).

They describe the role of conservatories from the 1600s to the 1970s.

Wedge, George A. 1921. *Ear-training and sight-singing applied to elementary musical theory: A practical and coordinated course for schools and private study*. New York: G. Schirmer, Inc.

Wedge's beginners-level book takes a functional approach to aural training, but incorporates both a fixed system (letter names) and a functional system (scale-degree numbers). The textbook begins with basic melodies outlining a tonic triad in the major mode, adds other scale-steps, followed by minor mode melodies, intervals, chords in major and minor keys, and forms.

_____. 1922. *Advanced ear-training and sight-singing as applied to the study of harmony: A continuation of the practical and coordinated course for schools and private study*. New York: G. Schirmer, Inc.

Wedge's advanced-level book is a continuation of the elementary method covering topics such as diatonic chords, chromatic chords, and modulation. He labels all Roman numerals with upper case (including minor) and the Roman numeral corresponds to the root of the chord even in secondary chords, i.e., a V7/V receives the label of II⁷_#.

Weidenaar, Gary. 2006. Solmization and the Norwich and tonic sol-fa systems. *The Choral Journal* 46/9 (March): 24-33.

Weidenaar describes changes that Curwen made to Glover's *sol-fa* system and he summarizes the criticisms of J.A. Fuller Maitland, a critic for *the Times* in 1921, of the tonic *sol-fa* system.

White, John D. and William E. Lake. 2002. *Guidelines for College Teaching of Music Theory*. 2nd ed. Lanham, MD: The Scarecrow Press.

White and Lake describe college teaching of music theory and ear training. In the chapter on aural skills, White writes about the topics: solmization, intervals, rhythm, and conducting. White claims that both interval-reading and diatonic feeling are important for locating pitches.

White, Robert A. 1983. A measure of the effects of a movable number system upon the perception and vocal performance of non-tonal music. DMA diss., Boston University.

R. White describes his research on the effects of using movable numbers in non-tonal music by upper-class college music majors. He concludes that the movable number system is an effective means of sight-singing non-tonal music because of the significant improvement in the scores that observed.

Whittaker, W. Gillies. 1922. A reply to 'Tonic-solfa: Pro and con.' *The Musical Quarterly* 8/2: 265-272.

Whittaker replied to J.A. Fuller-Maitland's article. He disagreed with Fuller-Maitland's criticism of *la*-based minor and claimed that *la*-based minor was historically correct and that modulations were not problematic.

_____. 1924. The claims of tonic solfa—I. *Music & Letters* 5/4 (October): 313-321.

Whittaker described Curwen's tonic *solfa* system, made claims about the benefits of using tonic *solfa*, and he identified objections to using *do*-based minor.

_____. 1925. The claims of tonic solfa—II. *Music & Letters* 6/1 (January): 46-53.

Whittaker responded to critiques from a friend about his first article with the same title. The criticisms concerned the movable nature of the syllables, *solfa* notation, transposition, and modulation.

_____. 1932. The question of sol-fa. *The Musical Times* 73/1069 (March 1): 237-239.

Whittaker listed several reasons why tonic *sol-fa* was a good system. Some of those reasons identified include (1) chords are more easily identified by their *sol-fa* syllables in harmony class, (2) transposition is easier for tonic *sol-fa* than fixed *do*, and (3) tonic *sol-fa* gives similar tonal patterns identical syllables.

Whybrow, Stanley, T.H. Yorke Trotter, and W.G. Whittaker. 1925. The claims of tonic solfa. *Music & Letters* 6/2 (April): 161-173.

Trotter was critical of the tonic *solfa* system. He identified the following disadvantages of tonic *solfa*: there are different sets of symbols for major and minor keys, modulations are problematic, it hinders AP, and it does not work for all types of music.

Wilhem, B. 1839. *Manuel Musical: A l'usage des colleges, des institutions, des écoles, et des cours de chant*. Vols. 1 and 2. Paris: Perrotin.

Wilhem's manual uses procedures associated with fixed-*do* methods and other advocates of the fixed-*do* method model their textbooks on this manual.

Winnick, William. 1984. Pivot analysis in Bernstein's Chichester psalms: A guide for singers. *The Choral Journal* 24/7 (March): 17-19, 22.

Winnick describes a method (using relative movable *do* and a pivot system) to sing difficult chromatic and modulatory passages and claims his method works for every era of composition from Palestrina through Ives and Schönberg.

_____. 1987. Hybrid methods in sight-singing. *The Choral Journal* 28/1: 24-30.

Winnick describes sight-singing systems that are variations of the traditional solmization systems.

Winters, Geoffrey. 1970. The Kodály concept of music education. *Tempo*, New Series 92: (Spring): 15-19.

Winters describes the use of Kodály's method in England. English music does not emphasize pentatonic harmonies; instead, there is a tonic and dominant focus. Winters recommends beginning with a tonic triad and adding *re* and *fa* later.

Wittlich, Gary E. and Lee Humphries. 1974. *Ear training: An approach through music literature*. New York: Harcourt Brace, Jovanovich, Inc.

Wittlich and Humphries' ear-training textbook may work better as a reference book rather than as a textbook because it is too difficult for a beginning ear-training class and it does not present exercises in a graduated order. The book contains fourteen complete works or movements from music of the fifteenth to the twentieth century.

Wright, Allan M. 1984. Sight reading: Are we losing the skill? *Instrumentalist* 39 (November): 74-76.

Wright offers suggestions on how to improve sight-reading.

Yasui, Byron K. and Allen R. Trubitt. 1989. *Basic sight singing*. Mountain View, CA: Mayfield Publishing Company.

Yasui and Trubitt's sight-singing textbook is for fundamental aural-skills classes. The exercises, predominantly newly composed, occur in a graded order and emphasize a functional approach. The authors place scale-degree numbers and movable solfège above exercises in the text before introducing minor mode; after minor mode occurs, they only use scale-degree numbers.

Young, J. Alfred. 1988. Hungarian solfège methods: Their history and their relevance to the training of professional musicians today. *Kodály Envoy*. 15/2: 15-21.

Young describes a brief history of solmization progressing up to Kodály's method, and then he describes the goal of Kodály's method.

Zinar, Ruth. 1983. John Curwen: Teaching the tonic sol-fa method 1816-1880: An English minister proposed teaching music through the sound of tones and only later using notation. *Music Educators Journal* 70/2 (Oct.): 46-47.

Zinar describes Curwen's method beginning with Glover's system, followed by Curwen's modifications to Glover's system, and the influence of Curwen on Kodaly's method.